PATROL® Installation Reference Manual

Installation Utility
Version 7.3.11

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bmcsoftware

Restricted Rights Legend

Contacting BMC Software

You can access the BMC Software Web site at **http://www.bmc.com**. From this Web site, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

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Customer Support

You can obtain technical support by using the Support page on the BMC Software Web site or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see “Before Contacting BMC Software.”

Support Web Site

You can obtain technical support from BMC Software 24 hours a day, 7 days a week at **http://www.bmc.com/support.html**. From this Web site, you can

- read overviews about support services and programs that BMC Software offers
- find the most current information about BMC Software products
- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

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Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
  - — product name
  - — product version (release number)
  - — license number and password (trial or permanent)
- operating system and environment information
  - — machine type
  - — operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - — system hardware configuration
  - — serial numbers
  - — related software (database, application, and communication) including type, version, and service pack or maintenance level

- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as `file system full`
  - messages from related software

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About This Book

This book contains reference information about installing the PATROL® product and is intended for system administrators, database administrators, and all others who install PATROL in their environment.

Note

This book assumes that you are familiar with your host operating system. You should know how to perform basic actions, such as choosing menu commands and dragging and dropping icons.
If you are using a Unix system, you should also understand basic Unix commands such as `cd`, `rm`, and so forth.

How This Book Is Organized

This book is organized as follows. In addition, this book contains an index.

Chapter/Appendix	Description
Chapter 1, “Installation Overview and Requirements”	provides information about the installation utility and lists installation requirements
Chapter 2, “Installing Products”	provides information about options for installing products
Chapter 3, “Command Line Options for Launching the Installation Utility”	provides information about options that you can use when launching the installation utility from a command line
Chapter 4, “Configuring Products”	provides information for configuring PATROL products after installation
Chapter 5, “Upgrading to a New Version of PATROL”	provides procedures for upgrading your previous version of PATROL to a new version. You should read this chapter before installing if you are upgrading your PATROL environment
Chapter 6, “Uninstalling Products”	provides procedures for uninstalling PATROL products
Appendix A, “PATROL Installation Directories”	describes the PATROL directory structure
Appendix B, “Using PATROL with Firewalls”	describes how PATROL components communicate across firewalls
Appendix C, “Troubleshooting”	lists common error messages and solutions

Related Documentation

BMC Software products offer several types of documentation:

- online and printed books
- online Help
- release notes

In addition to this book and the online Help, you can find useful information in the publications listed in the following table. As “Online and Printed Books” on page xv explains, these publications are available on request from BMC Software.

Category	Document
Console documentation	*PATROL Console for Microsoft Windows User Guide Understanding the Basics of PATROL Volume 1*
	PATROL Console for Microsoft Windows User Guide Monitoring and Managing with PATROL Volume 2
	PATROL Console for Microsoft Windows User Guide Customizing PATROL Volume 3
	PATROL Console for Unix User Guide
	PATROL Central Operator – Microsoft Windows Edition Getting Started
	PATROL Central Operator – Web Edition Getting Started
Agent documentation	*PATROL Agent Reference Manual*
Product getting started guides	*See the documentation for the specific products that you want to install*

Online and Printed Books

The books that accompany BMC Software products are available in online and printed formats. Online books are formatted as Portable Document Format (PDF) files. Some online books are also formatted as HTML files.

To Access Online Books

To view any online book that BMC Software offers, visit the Customer Support page of the BMC Software Web site at **http://www.bmc.com/support.html**. You can also access PDF books from the documentation compact disc (CD) that accompanies your product.

Use the free Acrobat Reader from Adobe Systems to view, print, or copy PDF files. In some cases, installing the Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at **http://www.adobe.com**.

To Request Additional Printed Books

BMC Software provides some printed books with your product order. To request additional books, go to **http://www.bmc.com/support.html**.

Online Help

You can access Help for a product through the product's **Help** menu. You can access Help for the installation utility from the Help buttons on each window in the utility. The Help provides information about the product's graphical user interface (GUI) and provides instructions for completing tasks.

Release Notes

Printed release notes accompany each BMC Software product. Release notes provide up-to-date information such as

- updates to the installation instructions
- last-minute product information

The latest versions of the release notes are also available on the Web at **http://www.bmc.com/support.html**.

Conventions

The following conventions are used in this book:

- This book includes special elements called *notes*, *warnings*, *examples*, and *tips*:

Note

Notes provide additional information about the current subject.

Warning

Warnings alert you to situations that can cause problems, such as loss of data, if you do not follow instructions carefully.

Example

An example clarifies a concept discussed in text.

Tip

Tips contain information that might improve product performance or that might make procedures easier to follow.

- `All syntax, operating system terms, and literal examples are presented in this typeface.`

- In instructions, **boldface** type highlights information that you enter. File names, directories, Web addresses, e-mail addresses, and names of GUI elements also appear in boldface type.

- The symbol => connects items in a menu sequence. For example, **Actions => Create Test** instructs you to choose the **Create Test** command from the **Actions** menu.

- The symbol » denotes one-step instructions.

- In syntax, path names, or system messages, *italic* text represents a variable, as shown in the following examples:

  `The table tableName is not available.`

  system/*instance/fileName*

- In syntax, the following additional conventions apply:

  — A vertical bar (|) separating items indicates that you must choose one item. In the following example, you would choose *a*, *b*, or *c*:

  `a | b | c`

  — An ellipsis (. . .) indicates that you can repeat the preceding item or items as many times as necessary.

  — Square brackets ([ ]) around an item indicate that the item is optional.

1

Installation Overview and Requirements

This chapter provides information about the installation utility and lists installation requirements. It contains the following topics:

About the Installation Utility

By using the BMC Software installation utility, you can perform a local installation or uninstallation of BMC Software products on computers running Windows or Unix operating systems. The installation utility also provides an option so you can create a product image that can be transferred to and installed locally on remote computers (remote installation functionality).

Checking Installation Requirements

When you plan an installation of BMC Software products, you must consider whether limitations or restrictions exist in your environment.

Before you launch the installation utility, ensure that your environment meets the hardware and software requirements described in the following sections. Also, before you install any product to your environment, consult the product getting started guides and release notes for the requirements for each product that you want to install and for detailed installation information.

Hardware and Operating System Requirements

The following sections describe the hardware and operating system requirements for both Windows and Unix environments and the supported Web browsers for the installation utility.

Windows

To run the installation utility in your Windows environment, your operating system must be one of the following types:

- Windows 2000 Server, Service Pack 2 or 3 (Intel)
- Windows 2000 Server with Citrix Metaframe, Service Pack 2 or 3
- Windows 2000 Datacenter Server, Service Pack 2 or 3
- Windows NT 4.0, Service Pack 6A (Intel)

- Windows NT 4.0, Enterprise Edition, Service Pack 6A (Intel)
- Windows XP Professional
- Windows 2000 Professional, Service Pack 2 or 3
- Windows 2000 Advanced Server, Service Pack 2 or 3
- Windows .NET, Standard Server, Enterprise Server, and DataCenter Server, Beta 3 release up to build 3628

  On .NET platforms, the installation utility must be run from a command line using the **-serveronly** command line option. For more information on **-serveronly**, see Chapter 3, "Command Line Options for Launching the Installation Utility."

Note

In accordance with BMC Software's support policy, BMC Software plans to provide toleration support for the .NET Server product line after it is released by Microsoft. Towards that end, this release of the installation utility has passed testing with the Beta 3 release of the .NET Server product line up to build 3628. However, the installation utility should not be used with .NET Server in a production environment at this time. Customer support requests related to the .NET Server product line will be considered on a case-by-case basis.

The hardware requirements include

- a CD-ROM drive (or network access to a CD-ROM product image)
- a FAT or NTFS file system (HPFS is not supported)
- a 256-color display environment on any computer where you want to install products

Unix

The CPU and operating system requirements for the installation utility for Unix are shown in Table 1-1.

Table 1-1 CPU and Operating System Version Requirements for Unix (Part 1 of 2)

CPU	Operating System	Supported Versions	Comments
DEC Alpha	Tru64 Unix	4.0F, 4.0G, 5.0A, 5.1, 5.1A	
HP 9000/700	HP-UX	10.20	
HP 9000/700	HP-UX	11.0, 11i (B.11.11)	32-bit; 11i is 32-bit RISC
HP 9000/800	HP-UX	11.0, 11i (B.11.11)	64-bit; 11i is 64-bit RISC
IBM RS/6000	AIX	4.3.2, 4.3.3, 5.1, 5.2	32-bit; 5.1 is 32-bit RISC
IBM RS/6000	AIX	4.3.2, 4.3.3, 5.1, 5.2	64-bit; 5.1 is 64-bit RISC
Sun SPARC	Solaris	2.5.1, 2.6, 7, 8, 9	32-bit; 2.5.1 not supported on international platforms
Sun SPARC	Solaris	7, 8, 9	64-bit
Siemens Nixdorf	SINIX/Reliant Unix	5.4.3, 5.4.4, 5.4.5	64-bit
Intel	Red Hat Linux	6.1, 6.2, 7.0, 7.1, 7.2, 7.3, Advanced Server 2.1	6.1 not supported on international platforms
IBM zSeries	Red Hat Linux	7.2	31-bit
Intel	DYNIX ptx	4.5.2, 4.6.1	i386; not supported on international platforms
Intel	SuSE Linux	6.3, 6.4, 7.0, 7.1, 7.2, 7.3, 8.0	i386

Table 1-1 CPU and Operating System Version Requirements for Unix (Part 2 of 2)

CPU	Operating System	Supported Versions	Comments
IBM zSeries	SuSE Linux	Enterprise Server 7.0, 7.2	7.0 is 31-bit only; 7.2 is 31-bit and 64-bit
Intel	Linux for s/390		

Web Browser

The following Web browsers are supported by the installation utility:

- Microsoft Internet Explorer version 5.0, 5.5, and 6.0 for Windows platforms only (version 5.0 and 5.5 are not supported on Windows XP and .NET)
- Netscape version 4.75 through 4.78 for English and international platforms and the following versions for specific international platforms:
  - version 4.7 for Japanese platforms running Solaris 2.6, 7, and 8
  - version 4.72 for Japanese platforms running Red Hat Linux 6.2 and 7.1
  - version 4.73 for Korean platforms running Red Hat Linux 6.2, 7.0, and 7.1
  - version 4.78 for all international platforms running Red Hat Linux 7.2

Note

You must have Java Script enabled in Netscape.

Note

You cannot run the installation utility if your browser is set to high security mode.

Defining Proxy Servers

If you have defined a proxy server for internet connections, your browser may be unable to connect to the Perl Web server that is used by the installation utility. You can either remove the proxy connection setting and close the browser before running the installation utility, or you can bypass the proxy connection setting by performing the following task for your browser:

- Internet Explorer: In the browser window, select **Tools => Internet Options => Connections tab => LAN Settings => Bypass proxy server for local addresses**.

- Netscape: In the browser window, select **Edit => Preferences => Advanced => Proxies => Manual Proxy Configuration => View** and enter your domain in the **Exceptions** field.

Displaying Installation Utility Online Help

The installation utility includes a browser-based online Help system that can be accessed from the Help button on each window in the utility. To properly display the online Help

- the Web browser that you are using to run the installation utility must be Java-enabled

- you must have a Java virtual machine or Java Plug-in version 1.1.2 or later installed

- the **java40.jar** file must exist in your Netscape installation directory

  If it does not exist, you must download and reinstall Netscape.

- on Unix computers, the variable MOZILLA_HOME should be set to point to the root of the Netscape installation directory

Example

For sh or ksh users, if the Netscape installation directory is **/opt/netscape**, enter the following commands to set this variable:

```
MOZILLA_HOME=/opt/netscape
export MOZILLA_HOME
```

Example

For csh users, if the Netscape installation directory is **/opt/netscape**, enter the following command to set this variable:

```
setenv MOZILLA_HOME /opt/netscape
```

Setting Font Size

If the font size in your browser is too large or too small, you can adjust the size as shown below.

Microsoft Internet Explorer

Choose **View => Text Size** and then one of the options that appears in the drop-down menu, **Largest**, **Larger**, **Medium**, **Smaller**, or **Smallest**. Experiment to see which size is most comfortable for you.

Netscape

Choose **View => Increase Font Size** or **View => Decrease Font Size**. You can adjust the font size until it is comfortable for you.

Memory and Disk Space Requirements

Check the memory and disk space requirements listed in the getting started guide for your products to determine the amount of disk space you will need to install each component on each computer. The installation utility also provides an estimate of how much disk space is required for all products that you select to install.

Network Requirements

For both Windows and Unix platforms, you must have a properly installed TCP/IP local area network.

Warning

The installation utility provides a command line option called **-serveronly** that you can use to start a Web server on one computer and connect to that server across a network from a browser running on another computer. The installation utility uses standard, unsecured HTTP for network communications, which can create security risks for passwords and other information that you may want to be secured across network traffic. Therefore, BMC Software recommends that you install locally or create an installable image to distribute to remote systems rather than use the **-serveronly** command line option in an unsecured network. For more information on command line options, see Chapter 3, “Command Line Options for Launching the Installation Utility.”

Windows Network Requirements

If you are installing PATROL in a Windows environment, the PATROL Agent requires the following provisions regarding IP addresses:

- The PATROL Agent must be able to obtain an IP address using the `gethostbyname` library call during startup.
- You should not change the IP address while the PATROL Agent is running.

If the Dynamic Host Configuration Protocol (DHCP) does not change the IP address when the lease expires, then the PATROL Agent for Windows supports computers that are configured for the DHCP. An IP address change could result in the console losing connectivity with the PATROL Agent. This loss of connectivity will not affect any other applications that may be running on the same computer.

If you experience a loss of connectivity between the console and agent, to reconnect, the standard TCP/IP must be able to produce the current IP address of the agent machine. Then, you must restart the PATROL Agent to bind the TCP sockets to the IP address for proper communication with the console.

Unix Network Requirements

Both ftp and telnet must be enabled on the computers on which you want to install PATROL.

BMC Software recommends that you install PATROL on local partitions, not on NFS-mounted partitions. You can send product packages to NFS-mounted partitions for local installation on those computers.

Note

If you do install PATROL on NFS-mounted partitions, the root account must have been granted root access privileges on the NFS server.

Changing the Default Installation Values

The installation utility installs PATROL products by using default values, unless you choose to change them in the installation utility.

If you are performing an over-the-top installation and you used different values when you installed the previous version of PATROL, you must change the default values to match those used in your previous environment so that you can install the new PATROL Agent and PATROL Classic Console in the same location as the previous versions.

Note

In an over-the-top installation, the customizations you have made to the previous versions of the agent and console are automatically preserved. For more information, see “Over-the-Top Installation” on page 5-7.

Installation Types for Local Installations

For most BMC Software products, you can choose between a **Typical** or **Custom** installation path to install products. By using the **Typical** path, you can select only product groups, and enter only mandatory product configuration information. By using the **Custom** path, you can select product groups, and then select or deselect individual products or components within a group. The **Custom** path also requires you to enter mandatory product configuration information, but also allows you to enter optional product configuration information.

For more information, see “Options for Selecting Products to Install” on page 2-8.

Remote Installations Using Installable Images

If you want to install products to more than one computer, you can use the installation utility to create an installable image of products, distribute that image to remote computers, then use the image to install the products on the computers to which the image was distributed.

You can distribute the image in several ways:

- tar the image and use ftp or secure ftp to send it to the remote computers
- use a third-party distribution system such as Microsoft Systems Management Server (SMS)
- burn the image to a CD and distribute the CD
- place the image on a shared network drive

  If you choose this option, make sure that the image's control file (**.ctl**) is read-only before placing the image on the drive so that the file is not deleted after the first installation. The control file stores the information that you enter in the installation utility, such as installation directory and any product configuration information. The installation engine uses the information stored in the control file to install the products in the location and with the configuration that you specify.

When you create an installable image, the product configuration information that you enter, such as installation directory, account names, passwords, and so forth, must be the same for all computers on which the image is installed. If you want to specify different settings for different computers, you must do one of two things:

- edit the variables in the image's control file by using the ctltool
- create a separate image for each set of values that you want to implement

For more information, see "Creating, Distributing, and Installing Installable Images" on page 2-13.

Setting Up An Installation Account

This section describes how to set up a PATROL installation account for Windows and Unix platforms.

PATROL Installation Account for Windows Environments

PATROL requires a dedicated user account in the Windows environment known as the PATROL default account. The PATROL default account must be created before you install PATROL. The PATROL default account can be a local or a domain account.

Stand-alone workgroup servers must use a local user account as a PATROL default account. Servers that are trusted members of a domain may use either a local or domain account. In each case, the PATROL default account must be a member of the local Administrators group of the computer where the agent will reside.

PATROL default accounts on domain controllers should be only domain accounts. The account on a domain controller must be a member of the domain Administrators group.

Although you can use an existing Windows user account, BMC Software recommends that you create a separate Windows user account for PATROL.

Do not use a domain or local Administrator account as the PATROL default account. Such account usage causes files created by PATROL to be owned by the Administrator, which could result in security or file access problems.

The PATROL Agent uses the default PATROL account for rights to perform the following advanced functions:

- collect information from performance counters
- collect information from the Windows event log
- self-tune for peak performance and nonintrusive use of the processor

- access system-level information
- make debug-level output available from the PATROL KM applications
- access the command interpreter for operating-system-level commands
- create and remove processes in the process table for collecting performance data

To enable the PATROL Agent to perform advanced functions, the PATROL default account must be granted the following advanced user rights. The installation utility automatically grants these rights to the default account:

Table 1-2 Advanced User Rights

Account Rights	PATROL Agent Dependencies
Act as part of operating system	enables PATROL to perform as a secure, trusted part of the operating system
Debug programs	enables PATROL to debug low-level objects
Increase quotas	enables PATROL to increase object quotas
Log on as a service	allows the PATROL Agent to be started as a service so that it will start on system boot
Log on locally	allows PATROL to log on at the computer
Profile system performance	enables PATROL to use the profiling capabilities of Windows
Replace a process level token	enables PATROL to modify a security access token for a process

PATROL APIs and Required User Rights

The following APIs that PATROL uses require certain advanced user rights. Table 1-3 shows the API and the advanced right that it uses.

Table 1-3 APIs and User Rights

API	Advanced User Right
LogonUser	• Act as part of operating system • Log on locally
TerminateProcess	Debug programs
CreateProcessAsUser	• Replace process-level token • Increase quotas
OpenSCManager	Log on as a service

PATROL Default Account as a Local User Accountt

You can create a local or domain user account if you are installing PATROL on a local server. The user account that you create will be used as the PATROL default account. The account must be a member of the local Administrators group.

The installation utility automatically grants the required advanced user rights to the PATROL default account during PATROL installation. If you would like to grant the advanced user rights before PATROL installation, you can grant them on the local server.

PATROL Default Account as a Domain User Account

You must create a domain administrator user account if you want to use a PATROL default account that resides on the domain level instead of on the local level. The PATROL default account must be a member of the Domain Administrator group. The Domain Administrator group or PATROL default account must also be a member of the local Administrators group of the server where you are installing or running the PATROL products.

During installation, the installation utility automatically grants the required advanced user rights to the PATROL default account on the server that contains the PATROL products. If you would like to grant the advanced user rights before PATROL installation, you can grant them on the server where you are installing or running the PATROL products.

Creating the PATROL Default Account

This section describes how to create the following accounts for Windows environments:

- local PATROL default account
- domain PATROL default account

Note

Be sure that no PATROL default accounts exist with the same name on the domain and the local level.

Windows NT

To create a local PATROL default account, use the **User Manager for Domain** utility on the local server. Add the local PATROL default account into the local Administrator group and select the **User Cannot Change Password** and the **Password Never Expires** options in the dialog box.

To create a domain PATROL default account, use the **User Manager for Domain** utility at the domain level. Add the domain PATROL default account into the Domain Administrator group and select the **User Cannot Change Password** and the **Password Never Expires** options in the dialog box.

Windows 2000

To create a local PATROL default account, use the **Computer Management** snap-in on the local server. Add the local PATROL default account into the local Administrator group and select the **User Cannot Change Password** and the **Password Never Expires** options in the dialog box.

To create a domain PATROL default account, use the **Active Directory Users and Computers** snap-in at the domain level. Add the domain PATROL default account into the Domain Administrator group and select the **User Cannot Change Password** and the **Password Never Expires** options in the dialog box.

Using a Local Account for Installation

To install products, log on to the local server with the local user account that you created that is a member of the local Administrator group. You will also enter the name of this account when you are prompted for the default account.

After you finish installing, you must log off and log back on to your computer so that the seven user rights shown in Table 1-2, “Advanced User Rights,” on page 1-13 will take effect. You do not need to reboot your machine unless it is specifically required by one of the products that you have installed on your computer.

PATROL Installation Account for Unix Environments

BMC Software recommends that the Unix account that you create meets the following conditions:

- The account **.login**, **.profile**, **.cshrc**, and **.kshrc** files should contain as little user customization as possible. Specifically, they should have no aliases, the prompt should be set to the default, and they should have no command to change the umask setting. The recommended umask setting for the installation account is 022.
- Do not use root to install PATROL products as this may create security risks.
- Be sure the account has permission to create directories in the directory where you will install PATROL products.
- The computers on which you want to install PATROL must have ftp and telnet enabled.
- PATROL configuration requires privileges usually reserved by the system administrator. These privileges include access to a root account on the hardware where you want to install PATROL.

- BMC Software recommends that you install PATROL on local partitions, not on NFS-mounted partitions. If you do install PATROL on NFS-mounted partitions, the root account must have root access privileges on the NFS server.

- The account that you use to install PATROL must have permission to write the installation logs to the **$HOME** and **/tmp** directories on the computer where you are installing products.

Gathering Product Configuration Information

To install products, you will be asked to enter product configuration information in the installation utility for the products that you are installing. The type and amount of information depends on the products that you are installing and the type of installation that you are performing (Typical or Custom). Consult the product getting started guides and release notes for details on the information that you must enter for each product that you are installing.

Installing Products

This chapter describes options for installing products. It includes the following topics:

Before You Install

The following sections describe activities you should perform before you install any products to your environment.

Before You Begin Installing to a Windows Computer

Complete the following tasks before you install to Windows platforms.

- Close all open applications on the computer where you are running the installation utility.
- If you are installing on a computer that is running Windows Terminal Services, make sure that the **check.exe** file exists in the **Windows\System32** directory. The installation utility uses this file to install products in a Terminal Services environment. If the file does not exist, you will need to copy it from another Terminal Services computer.
- Review the procedure in the next section if you are installing products on a backup domain controller.

Tip

If you will be using Netscape 4.78, set the priority to low so that the installation utility will run more efficiently.

Before you Install on a Backup Domain Controller

Note

Installing on a backup domain controller applies only to Windows NT 4.0 environments.

If you are installing products on a backup domain controller (BDC) without first installing to the primary domain controller (PDC) in a single domain, you must perform the following procedure before you install the products.

Step 1 From the **User Manager for Domains,** create a default account.

Step 2 Assign the required advanced user rights to the default account. See Table 1-2, “Advanced User Rights,” on page 1-13.

Step 3 Synchronize the entire domain. This process updates all the BDCs in the domain with the updated user account database.

Once you have completed this procedure, you can install products on a BDC using the account that you created.

Before You Begin Installing to a Unix Computer

Complete the following tasks before you install to Unix platforms.

- Mount the CD-ROM.
- Set the umask setting to **022**.
- Set the **DISPLAY** environment variable so that the GUI interface will be displayed properly on your system.
- Before you install products, you must disable any profiles that affect the login and root accounts. The installation and root accounts should have a “clean” login meaning that the login should be free of any special processing before a shell prompt is displayed.

Tip

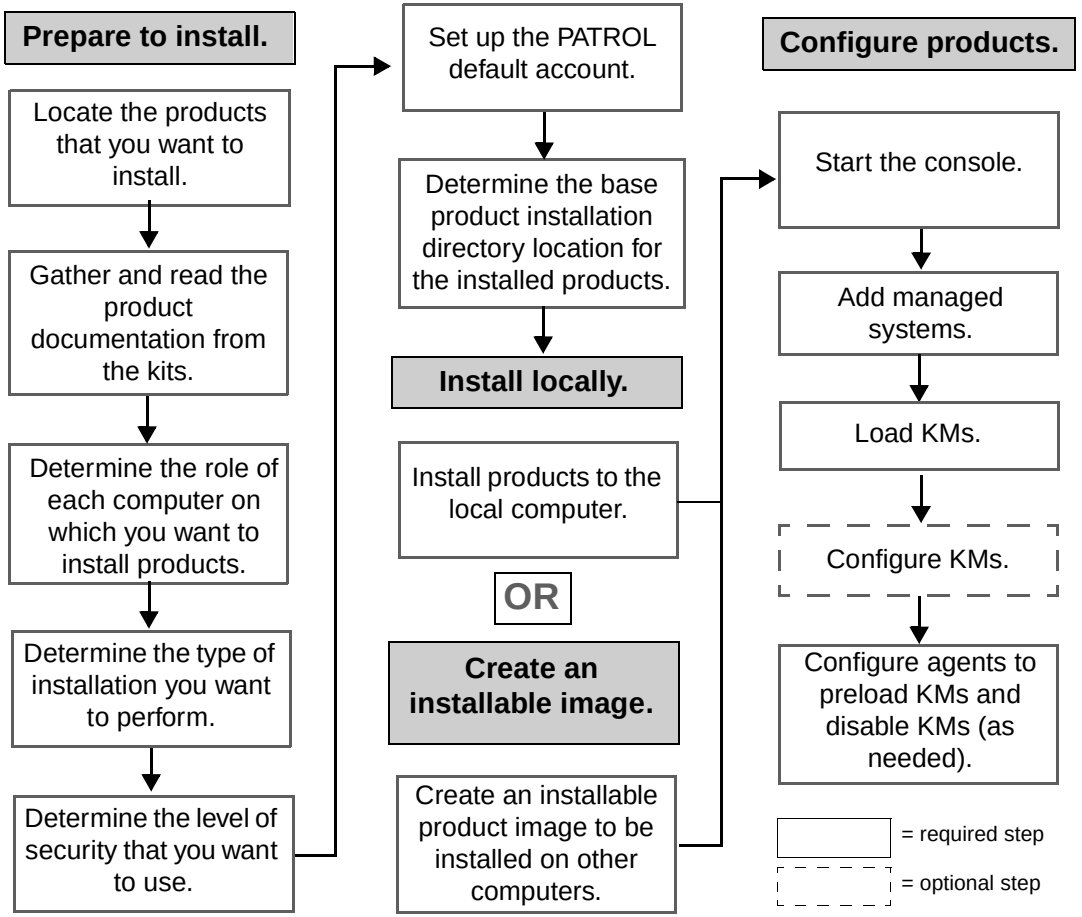
The preferred login shell is a Bourne shell. A Korn shell or a C shell is acceptable, but, on rare occasions, may cause intermittent problems during the installation; for example, the installation utility may be unable to access the root account to perform the installation.

Installing Products for the First Time

This section provides an installation workflow and checklist for installing PATROL products for the first time. For step-by-step installation instructions, see the getting started guides for the products that you are installing.

Installation Workflow for First Time Installation

The following workflow shows the process for installing PATROL products for the first time.



Installation Checklist for First Time Installation

Before you install products for the first time, use the checklist below to determine if you have all of the information you need.

- Account requirements have been met for Unix or Windows platform.
- A separate user account has been created to use as the default account for PATROL Agent. (A separate account is recommended but not required. You can use the same account to install PATROL and as the PATROL default.)
- TCP/IP protocol is used for data transfer across network.
- You have a list of products to be installed on each computer.
- You have reviewed system requirements for all products you plan to install.
- All target computers have enough disk space and RAM.
- All target computers running an RDBMS have enough semaphores and shared memory for both the RDBMS and PATROL.
- All target computers are running supported versions of the OS and other applications used with PATROL.
- All target computers have a similar directory structure so you can specify a single path for the location where PATROL products will be installed.

Options for Starting the Installation Utility

You can launch the installation utility from a command line and specify certain command line options to access additional functionality. For details on command line options, see Chapter 3, “Command Line Options for Launching the Installation Utility.”

Starting the Installation Utility on Windows Platforms

» Perform one of the following tasks:

- Use Windows Explorer to open the CD directory and double-click **setup.exe**. (Do this only if you do not want to specify any special command line options.)

- Open a DOS command window and change to the <***CD-ROM_drive***>**:\setup.exe** directory. Type **setup.exe** at the prompt and any other command line options you would like to include (if any), then press **Enter**.

Starting the Installation Utility on Unix Platforms

» Mount the CD-ROM and type **./setup.sh** at the root of the CD.

Note

On Unix systems, you cannot eject removable media while the media is being accessed; therefore, if your installation requires multiple product images and you are using removable media, then from a command line, cd to / and launch the installation utility by specifying the absolute path; for example, **/mnt/cdrom/setup.sh**.

Options for Installing Products

You can install products on the computer on which you are running the installation utility, or you can create an installable image of products that can be installed at a later time. For detailed instructions on how to install PATROL products, see the getting started guides for the products that you are installing. For detailed instructions on how to create an installable image, see “Creating, Distributing, and Installing Installable Images” on page 2-13.

Options for Selecting Products to Install

The list of products that you can select to install is based on the installation type and, optionally, on a system role that you select. Some products do not require different installation types or system roles. If this is the case for the product that you are installing, the Select Type of Installation and the Select System Role windows are not displayed in the installation utility. The following sections describe installing a product that uses two installation types.

Selecting Products By Using the Typical Installation Path

If you select the Typical installation path, you will see a product selection tree similar to the one shown in Figure 2-1.

Figure 2-1 Example of a Product Selection Tree View for PATROL Products—Typical Installation Path

The only selectable options shown are product solutions or groups, which are comprehensive sets of products designed to work together. If you are installing products using the Typical installation path, you can select only comprehensive solutions or groups from the product selection tree. When you select a solution or group, all of the products included in that product set are automatically selected; you may not be able to deselect individual products that you do not want to install if you use the Typical path.

In addition, you are presented with subsequent windows to enter only *mandatory* product configuration information.

Use the Typical installation path if your installation scenario is similar to one of the following examples:

- You are installing products for the first time.
- You would like to use default values for most product configuration information.
- You want to select a prepackaged group of products with predefined configurations.
- You are not familiar with the product set that you are installing.

Selecting Products By Using the Custom Installation Path

If you select the Custom installation path, you will see a product selection tree similar to the one shown in Figure 2-2 on page 2-10.

Figure 2-2 Example of a Product Selection Tree View for PATROL Products—Custom Installation Path

If you are installing products using the Custom installation path, you will see solutions or groups and individual products. When you select a solution or group, all of the products that belong to that product set (including required and optional products) are automatically selected. By using the Custom installation path, you can *deselect* any of the optional products that you do not want to install.

In addition, you are presented with subsequent windows to enter both *mandatory* and *optional* product configuration information about these products.

Use the Custom installation path if your installation scenario is similar to one of the following examples:

- You are upgrading a previous product installation (you can also use the Custom path if you are installing a product for the first time).
- You would like to select and deselect products within product groups.

- You want to more fully customize your product configuration.
- You are familiar with the product set that you are installing.

Selecting Security Levels

Security is easily employed in your environment by using predefined sets of security configurations. You select the security level when you install PATROL. PATROL employs a security system that protects your environment at your discretion and prepares you for security risks that might be inherent in your environment.

This version of PATROL provides five standard levels of security. Basic security (the default) is the lowest level of security. Advanced security (levels 1 through 4) provide increasingly higher levels of security, along with increasingly greater configuration demands. For more information, see the *PATROL Security User Guide*.

Note

If you plan on installing advanced security, BMC Software strongly recommends that you thoroughly review the contents of the *PATROL Security User Guide* for information about the configuration requirements of each security level.

If a product you select has specific security requirements, a security window is displayed during the installation. You can set the required level of security for the indicated product. See Table 2-1, on page 2-12 for an overview of all of the security levels.

Table 2-1 Product Security Levels

Security Level	Description
Basic security	• default level of security employed when you install PATROL • no cryptographic protection of network traffic • no verification of product or data integrity • authentication provided and protected password stored in unattended operations in the PATROL application • minimized security and access control lists (ACLs) in favor of usability and performance
Level 1	• Diffie-Hellman used for privacy • no SSL authentication of either party to the other
Level 2	• private communications provided by SSL • no SSL authentication performed (console runs in keyless mode) • defaults to unattended agent restart
Level 3	• private communications and server authentication provided by SSL • certificate provided by agent so that the console can authenticate the agent • console not authenticated back to the agent • defaults to unattended agent restart; can configure for attended agent restart
Level 4	• private communications and mutual authentication of the console and the agent provided by SSL • defaults to unattended agent restart; can configure for attended agent restart

Warning

For the PATROL Performance Assurance® products, selecting any advanced security level above the basic security level will disable network communication between the PATROL Performance Manager and the Perform agent.

Creating, Distributing, and Installing Installable Images

This section describes creating, distributing, and installing product images.

Installable Image Files and Directories

The installable image consists of the following files and directories.

You will use or refer to the following files when you launch the installation utility from an installable image.

- **install.exe** (Windows) or **install.sh** (Unix)—run this executable or script from a command line to install the products in the image on a local computer.

- ***.ctl**—this control file saves all of the installation and product configuration information that you entered when you created the image.

Warning

If you want to install the same image to more than one computer, you must change the file permissions on the control file to read-only so that the file is not erased after the first installation.

- *.**log**—when the installation is complete, log files are created in the directory from which you installed the image.

The installation utility uses information stored in the following directories to install the image.

- **Products**—this directory contains subdirectories that store the product files needed by the installation utility to install the products that are part of the image.

- **Install—**this directory contains two subdirectories, **instbin**, which stores the installation engine binaries and installation tools such as ctltool, and **instdata**, which stores the default text files that control the order in which the products are installed and that list the operating systems that are recognized by the installation utility.

Account Requirements for Creating an Installable Image on Windows Platforms

To create an installable image on Windows platforms, you must be a member of the local Administrator group on the computer on which you are creating the image. To install the image, the person performing the installation must be a member of the local Administrator group on the computer on which the image is installed.

Creating an Installable Image of Products

Summary: This procedure describes how to create a product image on a local computer for local installation on other computers. It applies to both Windows and Unix platforms.

Step 1 Start the installation utility.

Step 2 Review the license agreement and select **Accept**.

Step 3 On the **Select Installation Option** window, select **I want to create an installable image to be installed later** and enter the name of a directory on your computer where you would like to save the image.

Step 4 Proceed through the installation as you would if you were installing products locally, entering all required product configuration values.

Note

When you create an installable image, the product configuration information that you enter, such as product installation directory, account names, passwords, and so forth, must be the same for all computers on which the image is installed. If you want to specify different product configuration values for different computers, you must either create a separate image for each set of values that you want to implement or use the ctltool to change variables stored in the image's control file after the image is generated. For more information on using the ctltool, see "Editing Control Files for Installable Images" on page 2-21.

Step 5 On the **Review Selections and Create Image** window, click **Create Image**.

Note

To create an installable image that you can install on multiple Windows or Unix operating systems, you must launch the installation utility from a command line and use the **-repository_oslist** command line option to specify the operating systems on which you want the image to install. You can also use the **-repository_oslist** option to create an image on a Windows computer to be installed on Unix computers or create an image on a Unix computer to be installed on Windows computers. For more details, see "Command Line Options for Windows Platforms" on page 3-2 or "Command Line Options for Unix Platforms" on page 3-16.

Note

You cannot create an installable image that can be installed on both Windows and Unix computers. You must create one image for all Windows operating systems and one image for all Unix operating systems; however, you can create either image from a Windows or Unix computer.

Deploying the Installable Image to Your Environment

Once you have created an installable product image, you can deploy it to your environment for local installation in several ways:

- Tar the image and use ftp or secure ftp to send it to a remote computer.
- Use a third-party distribution system such as Microsoft Systems Management Server (SMS).
- Burn the image to a CD and distribute the CD.

- Place the image on a shared network drive.

  If you choose this option, make sure that the image's control file is read-only before placing the image on the drive so that the file will not be deleted after the first installation.

Once the image is copied to the computer, it can be installed as described in “Installing an Image on a Windows Computer” on page 2-18 or “Installing an Image on a Unix Computer” on page 2-20.

Note

If you created an installable image on a Windows computer to be installed on Unix computers, you must make sure that the method that you use to transfer the image (for example, tarring the image) maintains execute permission on the installable image files when you unpack the files on the Unix computer. If the permissions are not maintained, you may receive the following error message when you try to install the image: `"Error: Executable not found ’./thorinst.s25’`. To correct the file permissions, before you install the image, change to the directory where the unpacked image files are located and enter the following command: **chmod 755 -R ***.

Installing an Image on a Windows Computer

Summary: This procedure describes installing a product image locally in a Windows environment on the computer to which it was deployed.

Step 1 Once the installable image has been deployed, on the computer where you want to install the image, change to the directory that contains the image files.

Step 2 Open a command prompt and launch the installation utility by entering the following command:

install.exe *options*

where *options* are any command line options that you want to specify as listed in Table 2-2, on page 2-19.

The installation utility executes and installs the products associated with the image to the installation directory that you specified in the installation utility when you created the image. No status messages are displayed on the command line until the installation is complete. A log file is created in the directory where the image is stored that lists the products installed and whether or not the installation was successful.

Note

If you close the command prompt before you see the `Install completed` status message, you will terminate the installation.

Table 2-2 Installable Image Command Line Options for Windows

Option	Definition
-v	displays the installation utility version on the command line then returns to the command line prompt
-h	displays the available command line options
-path *directory*	lets you specify the path name to the installable image if you are not in the same directory
-log *location*	lets you specify the location where you want to store the log files. If not specified, the files are stored in the directory where the image was created.

Installing an Image on a Unix Computer

Summary: This procedure describes installing a product image locally in a Unix environment on the computer to which it was deployed.

Step 1 Once the installable image has been deployed, on the computer where you want to install the image, change to the directory that contains the image files.

Step 2 Launch the installation utility by entering the following command:

./install.sh ***options***

where *options* are any command line options that you want to specify as listed in Table 2-3, on page 2-21.

The installation utility executes and installs the products associated with the image to the installation directory that you specified in the installation utility when you created the image. No status messages are displayed on the command line until the installation is complete. A log file is created in the directory where the image is stored that lists the products installed and whether or not the installation was successful.

Note

If you close the command prompt before you see the `Install completed` status message, you will terminate the installation.

Table 2-3 Installable Image Command Line Options for Unix

Option	Definition
-v	displays the installation utility version on the command line then returns to the command line prompt
-h	displays the available command line options
-log *location filename*	lets you specify the directory location where you want to store the log file and, optionally, the name of the log file to be stored in that location. If you do not specify a log file name, the default log files, **install.log** and **install.log_user**, are created in the location that you specify. If you do not specify a location, the log files are created in the directory where the image was created.
-install *location*	installs the products from a control file stored in the location that you specify. If not specified, the installation utility looks for the control file in the directory where the image was created.
-output *location*	lets you specify the location where you want to store the output messages log file (**install-output.log**). If not specified, the file is stored in the directory where the image was created.

Editing Control Files for Installable Images

The ctltool is a utility that you can use to change the variables that are stored in a control file. The control file stores the information that you enter in the installation utility, such as installation directory and any product configuration information. The installation engine uses the information stored in the control file to install the products in the location and with the configuration that you specify.

You can use the ctltool to edit any control file, but it is particularly useful when you are creating an installable image, because you can change product configuration values for the image without having to create a new image.

For example, if you created an installable image of products to be installed on several Windows NT computers, but one of these computers has a different password and product installation directory than the other computers, in previous versions of the installation utility, you would have to create a new image to change these values. With the ctltool, you can change the values in the image's existing control file to create a new control file, then use the new control file to install the same image on the computer that requires the different values.

Using the ctltool to Edit Control Files for Installable Images in Windows Environments

Summary: This procedure describes how to edit the variables stored in an installable image's control file.

Step 1 Change to the **\Install\instbin** directory in the directory where the installable image is stored.

Step 2 From a command line, enter the following command:

ctltool.exe *drive:\path\inputfile.ctl drive:\path\outputfile.ctl*

The variable *drive:\path\inputfile.ctl* represents the path to and name of the control file that you want to edit (the control file that was created with the installable image), and the variable *drive:\path\outputfile.ctl* represents the path to and name of the new control file that you want to create.

For example, you create an installable image and store the image in a directory on your **D:** drive called **installable image**. When you create the image, the installation utility creates a **.ctl** file named **install.ctl** and stores that file in that directory along with the image. To edit this control file and create a new one in the same directory, at the command prompt, you would change to **D:\installable image\Install\instbin**, and enter **ctltool.exe "D:\installable image\install.ctl" "D:\installable image\newfile.ctl"**.

Note

If the path that you enter for the input control file or the output control file has a space in it, you must enclose the path in quotes.

The ctltool displays each variable name and its current value. You can enter a new value or keep the existing value. If you are changing a password variable, the value is encrypted in the new control file.

Step 3 Rename the new control file to **install.ctl** so that when you install the image, the installation utility uses the new control file. The installation utility looks for a control file named **install.ctl** to perform the installation.

Using the ctltool to Edit Control Files for Installable Images in Unix Environments

Summary: This procedure describes how to edit the variables stored in an installable image's control file.

Step 1 Change to the **/Install/instbin** directory in the directory where the installable image is stored.

Step 2 Enter the following command:

ctltool.sh *path/inputfile.ctl path/outputfile.ctl*

The variable *path/inputfile.ctl* represents the path to and name of the control file that you want to edit (the control file that was created with the installable image), and the variable *path/outputfile.ctl* represents the path to and name of the new control file that you want to create.

For example, you create an installable image and store the image in a directory called **installable image**. When you create the image, the installation utility creates a **.ctl** file named install.ctl and stores that file in that directory along with the image. To edit this control file and create a new one in the same directory, at the command prompt, you would change to **installable image/install/instbin**, and enter **ctltool.sh "installable image/install.ctl" "installable image/newfile.ctl"**.

Note

If the path that you enter for the input control file or the output control file has a space in it, you must enclose the path in quotes.

The ctltool displays each variable name and its current value. You can enter a new value or keep the existing value. If you are changing a password variable, the value is encrypted in the new control file.

Step 3 Rename the new control file to **install.ctl** so that when you install the image, the installation utility uses the new control file. The installation utility looks for a control file named **install.ctl** to perform the installation.

Performing a Multiple CD Installation

Some products may require using multiple CDs to install all their associated components. To perform a multiple CD installation, you must provide a temporary storage location on your computer. You enter this location in the **Temporary space for copying external components** window in the installation utility. You need to provide only a directory location (for example, **C:\temp** for Windows or **/tmp** for Unix). If the directory that you enter does not exist, the installation utility will attempt to create it.

Note

When you select the products that you want to install, the installation utility displays the approximate disk space required to complete the installation. When you perform a multiple CD installation, you must also make sure that the temporary directory that you specify has adequate disk space to make a copy of all the components required by the product.

Creating the temporary directory may take a few moments. When the directory has been created, you will be asked to load each of the required CDs in sequence. Then, you will be asked to place the original CD back in the CD-ROM drive. The installation utility will copy the required pieces from each CD to the temporary space that you designate and combine all the files for the installation. After the installation is complete, the installation utility removes the copied files from the temporary directory, and you may then delete the temporary directory.

Note

On Unix systems, you cannot eject removable media while the media is being accessed; therefore, if your installation requires multiple product images and you are using removable media, from a command line, cd to / then launch the installation utility by specifying the absolute path; for example, **/mnt/cdrom/setup.sh**.

Locating Log Files

When you complete a product installation, you will receive a status message indicating the success or failure of the installation. Also, you can view installation log files from the installation utility. The following sections describe where the log files are stored for both Windows and Unix operating systems.

Tip

You can use the installation utility **-trace** command line option to create a trace file that records detailed information about activities in the installation utility interface during installation. Once the installation is complete, the trace file information is added to the beginning of the standard log file.

Location of Windows Log Files

The installation utility stores the standard log files in the following directories:

For Windows NT:

C:\winnt\Profiles*username*\Application Data\BMCINSTALL

For Windows 2000:

C:\Documents and Settings*username*\Application Data\BMCINSTALL

By default, the Application Data directory on Windows operating systems is hidden. To view this directory so that you can locate the installation log files, open Windows Explorer and for Windows NT, choose **View => Options => Show all files**. For Windows 2000 and Windows XP, choose **Tools => Folder Options => View => Show hidden files and folders**.

Location of Unix Log Files

The installation utility stores the standard log files in the following directory:

$HOME/BMCINSTALL

Installing an Agent or Console Patch to Your Environment

A product package is a compressed file containing one or more product files; it may contain all product files for a full release or only those product files that have been added or changed for a patch release.

Warning

This procedure applies only to patches for the PATROL Agents and consoles. Do not use this procedure to apply patches to PATROL KMs. See the technical bulletin provided with your KM for specific patch information.

System requirements for each product are listed in the README file for the patch, or in the product release notes or documentation. Be sure to check that your system meets the requirements before proceeding with the installation.

Accessing the BMC Software Support Web Site

The BMC Software Support Web site is located at **http://www.bmc.com/support.html**. Log on to the Web site and click the **Complete List of Products** link to view an alphabetical list of BMC Software products. If you are a first time user, you can request a user name and password either by clicking **Register for a Login ID** on the support page or by contacting a BMC Software sales representative.

At the list of products, click the name of the product you want to update. The product's Web page is displayed and shows any available patches or new versions of the product. For more information about the BMC Software Support Web page, contact your BMC Software sales representative.

Note

On the BMC Software Support Web site, you can register for proactive notification for your products. Click **Tell Me About Proactive Notification Service** to begin the registration process. You must be a registered BMC Software Customer Support Web site user with a valid login ID and password to receive proactive notification. Once you register, you will receive email notification when one of your products has been updated. You can then access the products as described in the following procedures to upgrade your environment.

Downloading the Patch

Patches are distributed on the FTP site. You can access the BMC Software FTP site using one of two methods:

- DOS command window
- Web browser

Accessing the FTP Site From a DOS Command Line

Complete the following task to access the FTP site from a command line.

Step 1 From a command line, enter **ftp ftp.bmc.com** to log in to the FTP site. The IP address for **ftp.bmc.com** is 198.64.253.548.

Step 2 Enter **anonymous** in the **User Name** field.

Step 3 Enter your e-mail address in the **Password** field.

Step 4 Change to the **/pub/patrol/patches** directory by typing **cd /pub/patrol/patches**. Be sure to specify products for your specific platform.

Step 5 Change to the directory that contains the product you want to upgrade.

Step 6 Set the transfer mode to binary by typing **binary**.

Step 7 Retrieve the patch you want by typing **get *patchname*.exe** at the command prompt.

Step 8 If you need the PATROL installation utility, you can get the latest version from the **/pub/patrol/patches/COMMON_INSTALL7.3.11** directory. Change to the directory for the platform that you want to install on. Change the transfer mode to binary, then type **get *installation_utility*.exe** at the command prompt.

Accessing the FTP Site Using a Web Browser

Complete the following task to access the FTP site using a Web browser.

Step 1 Open a Web browser.

Step 2 Enter **ftp.bmc.com** in the URL field.

Step 3 Double-click the folders to get to the **/pub/patrol/patches** directory.

Step 4 Double-click the folder that contains the product you want to update.

Step 5 Select the product version and platform by double-clicking on the appropriate folders.

Step 6 When you open the folder containing the product executables, select the executable you want to download by clicking on it. You will be prompted to save the executable to your hard drive.

Step 7 If the product that you are downloading has a readme file associated with it, read this document before installing the patch into your environment.

Installing the Patch

Summary: This procedure describes installing a patch to a PATROL Agent or console. This procedure can be used on Windows or Unix platforms.

Installing the Patch

Step 1 Download the patch from the ftp site and save it to a directory as described in “Downloading the Patch” on page 2-29.

Step 2 Change to the directory.

Step 3 Double-click **setup.exe** (Windows) or type **./setup.sh** (Unix) and run the installation utility to install the patch.

Patch Issues with the PATROL KMDS

The PATROL Knowledge Module™ Deployment Server™ does not handle patch releases (that is, a release containing only the product files that have been changed or added, not the full product). If you are downloading a patch release, you cannot install it directly into the PATROL KMDS. See the product release notes or README file for specific instructions.

3

Command Line Options for Launching the Installation Utility

This chapter describes the command line options that you can use to specify certain functions when you launch the installation utility. It includes the following topics:

Command Line Options for Windows Platforms

The following sections describe the command line options for launching the installation utility on Windows platforms so that you can extend the functionality of the installation utility.

Table 3-1 describes the command line options that you can use to launch the installation utility from a command line in Windows environments. For details on each option, see “Using the Command Line Options for Windows” on page 3-4.

Table 3-1 Command Line Options for Windows Installation (Part 1 of 2)

Option	Definition	For Details
-h, -?, -help	displays the list of command line options	see page 3-4
-kmds	allows you to install a KM directly into the PATROL KMDS	see page 3-5
-kmdsportnum *portnum*	use this option with the -kmds option; allows you to specify the port number to use when you install a KM into the PATROL KMDS	see page 3-6
-locale *locale*	installs language-specific resource files for the language that you specify	see page 3-7
-port *portnum*	allows you to specify a port number to use to connect to the installation Web server	see page 3-8
-releaseversion *version*	runs older install scripts. Use this option if you are installing a new KM into a previous release of PATROL.	see page 3-9
-repository_designator *role*	allows you to select a system role from the command line so that the products that are displayed in the Select Products and Components to Install window are filtered for the roles that you specify.	see page 3-10
-repository_oslist *ostag*	use this option when you create an installable image of products; allows you to specify a list of platforms on which you want the image to install	see page 3-11

Table 3-1 Command Line Options for Windows Installation (Part 2 of 2)

Option	Definition	For Details
-serveronly	use this option if you do not have a browser on the computer on which you want to install products; allows you to start the installation Web server on one computer, then connect to that Web server using a browser on another computer.	see page 3-12
-timeout *seconds*	allows you to specify the number of seconds that the installation utility will wait for connection to the installation Web server	see page 3-13
-trace	records detailed information about activities in the installation utility GUI during installation	see page 3-14
-v	displays the version number for the installation utility	see page 3-15

Using the Command Line Options for Windows

The following sections describe how to use each command line option.

-h, -?, -help

This option displays the list of command line options.

Syntax

```
setup.exe -h
setup.exe -?
setup.exe -help
```

Options

None.

-kmds

In a PATROL environment, this option lets you install a KM directly into the PATROL KMDS if a PATROL KMDS exists in your environment. If you want to specify a port number to use to connect to the PATROL KMDS, you must use the **-kmdsportnum** option along with this option. For details on the PATROL KMDS, see the *PATROL Knowledge Module Deployment Server Manager User Guide*.

Syntax

```
setup.exe -kmds
```

Options

None.

-kmdsportnum *portnum*

In a PATROL environment, this option lets you specify a port number to use to connect to a PATROL KMDS if you are installing KMs directly into the PATROL KMDS. If you do not specify a port number, the installation utility uses a default port number of 3182. You must use this option with the **-kmds** option to specify the port number. For details on the PATROL KMDS, see the *PATROL Knowledge Module Deployment Server Manager User Guide*.

Syntax

```
setup.exe -kmds -kmdsportnum 1590
```

Options

Any number from 1 to 65534.

-locale *locale*

This option lets you select and install only those products that are compatible with the locale (language) that you specify. You can specify only one locale. The installation utility will filter the list of products that will be displayed in the Select Products and Components to Install window to display only those products that are either specific to the locale that you specify or that do not have a locale designation.

If you do not specify an option, then the locale from the system on which you are running the installation utility is used. If the system locale is not supported by the installation utility, then the English locale, en_US, is used. This option does not change the language of the text displayed in the installation utility. The installation utility will run in English regardless of the system locale or the -locale option that you enter except as noted. In addition, you will be able to input only English characters.

Note

If you set the -locale option to be the same as the system locale, you will install the appropriate products and language resource files, but the installation utility will run in either English or the system locale language and will accept input in either English or the system locale language.

Syntax

```
setup.exe -locale en_US
```

Options

Language	Option
English	en_US
Traditional Chinese	zh_TW
Simplified Chinese	zh_CN
Korean	ko_KR
Japanese	ja_JP

-port *portnum*

This option lets you specify a port number to use to connect to the installation Web server. Use this option if the port number to the Web server is locked and you want to specify another open port, or if you are using the **-serveronly** command line option and you need to open a port through a firewall. If not specified, the default value is 50001. If this port number is in use, the installation utility increases the number by one and tries again to connect to the Web server.

Syntax

```
setup.exe -port 3184
```

Options

Any number from 1 to 65534.

-releaseversion *version*

In a PATROL environment, this option lets you install a new KM into an existing PATROL environment.

Syntax

```
setup.exe -releaseversion 3.4
```

Options

Option	Description
3.2	for 3.2.*x* platforms and components
3.3	for 3.3.*x* platforms and components
3.4	for 3.4.*x* platforms and components
3.5,7.1	for 3.5.*x* and 7.1.*x* platforms and components. These options should always be specified together.
7.2	for 7.2 platforms and components. This is the default for this version of the installation utility.

-repository_designator *role*

This option lets you select a system role for the products that you are installing. Products with a particular system role will be displayed in the Select Products and Components to Install window. The options that you specify vary from product to product. Valid options can be found in the **sysroles.xml** file in the **BMCINSTALL\Index** directory. If you specify this option, the System Roles window in the installation utility will not be displayed.

Syntax

```
setup.exe -repository_designator PAT,PAA
```

Options

Depends on the products that you are installing. See the **sysroles.xml** file for valid options.

-repository_oslist *ostag*

This option lets you create an installable image on one Windows operating system and install the image on another Windows or Unix operating system.

Note

You cannot create one installable image that can be installed on both Windows and Unix computers. You must create two separate images, one for Windows platforms and one for Unix platforms.

Syntax

```
setup.exe -repository_oslist int_nt.40,int_nt.50
```

where the operating system tag that you specify is the valid operating system tag required by the installation utility to create an image that can be installed on a specific operating system. You must specify a tag for each operating system on which you want the image to install.

Options

Table 3-2 lists the tags that you must enter for each Windows operating system supported by the installation utility. Table 3-4, on page 3-26 lists the tags that you must enter for each Unix operating system supported by the installation utility.

Table 3-2 Operating System Tags for Creating an Installable Image for Windows Platforms

Target Operating System	Valid -repository_oslist tags required
Windows 4.0	int_nt.40
Windows 2000	int_nt.50
Windows XP	int_nt.51
Windows .NET	int_nt.52

-serveronly

This option lets you start the installation Web server on one computer, then connect to that Web server using a browser on another computer. Use this option if you do not have a browser on the computer where you want to install products. When you launch the installation utility with this command line option, the installation Web server is started, and a message box is displayed that shows a URL. On the computer with the browser, start the browser and enter this URL to connect to the Web server.

Warning

The **-serveronly** command line option is not secure over a network and using it in an unsecured network environment could result in security violations. If this is an issue for your environment, you may want to consider either performing only local installations or creating an installable product image that can be sent to a remote computer and installed on it locally, rather than installing over an unsecured network. For details on creating an installable image, see “Creating, Distributing, and Installing Installable Images” on page 2-13.

Syntax

```
setup.exe -serveronly
```

Options

None.

-timeout *seconds*

This option lets you specify the number of seconds that the installation utility will wait to connect to the installation Web server.

Syntax

```
setup.exe -timeout 120
```

Options

Any number from 120 to 500.

-trace

This option lets you record detailed information about what is happening in the installation utility GUI during a product installation. This information is added to the beginning of the standard log file. You can select to view the standard log file from the installation utility when the installation is complete.

For information where to find installation log files, see “Locating Log Files” on page 2-27.

Syntax

```
setup.exe -trace
```

Options

None.

-v

This option displays a dialog box with the version number for the installation utility but does not launch the installation utility.

Syntax

```
setup.exe -v
```

Options

None.

Command Line Options for Unix Platforms

The following sections describe the command line options for launching the installation utility on Unix platforms so that you can extend the functionality of the installation utility.

Table 3-3 describes the command line options that you can use to launch the installation utility from a command line in Unix environments. For details on each option, see “Using the Command Line Options for Unix” on page 3-18.

Table 3-3 Command Line Options for Unix Installation (Part 1 of 2)

Option	Definition	For Details
-h	displays the list of command line options	see page 3-18
-kmds	allows you to install a KM directly into the PATROL KMDS	see page 3-19
-kmdsportnum *portnum*	use this option with the -kmds option; allows you to specify the port number to use when you install a KM into the PATROL KMDS	see page 3-20
-locale *locale*	installs language-specific resource files for the language that you specify	see page 3-21
-port *portnum*	allows you to specify a port number to use to connect to the installation Web server	see page 3-22
-releaseversion *ver*	runs older install scripts. Use this option if you are installing a new KM into a previous release of PATROL.	see page 3-23
-repository_designator *role*	allows you to select a system role from the command line so that the products that are displayed in the Select Products and Components to Install window are filtered for the roles that you specify.	see page 3-24
-repository_oslist *ostag*	use this option when you create an installable image of products; allows you to specify a list of platforms on which you want the image to install	see page 3-25

Table 3-3 Command Line Options for Unix Installation (Part 2 of 2)

Option	Definition	For Details
-serveronly	use this option if you do not have a browser on the computer on which you want to install products; allows you to start the installation Web server on one computer, then connect to that Web server using a browser on another computer.	see page 3-29
-timeout *seconds*	allows you to specify the number of seconds that the installation utility will wait for connection to the installation Web server	see page 3-30
-trace	records detailed information about activities in the installation utility GUI during installation	see page 3-31
-v	displays the version number for the installation utility	see page 3-32

Using the Command Line Options for Unix

The following sections describe how to use each command line option.

-h

This option displays the list of command line options.

Syntax

```
./setup.sh -h
```

Options

None.

-kmds

In a PATROL environment, this option lets you install a KM directly into the PATROL KMDS if a PATROL KMDS exists in your environment. If you want to specify a port number to use to connect to the PATROL KMDS, you must use the **-kmdsportnum** option along with this option. For details on the PATROL KMDS, see the *PATROL Knowledge Module Deployment Server Manager User Guide*.

Syntax

```
./setup.sh -kmds
```

Options

None.

-kmdsportnum *portnum*

In a PATROL environment, this lets allows you specify a port number to use to connect to a PATROL KMDS if you are installing KMs directly into the PATROL KMDS. If you do not specify a port number, the installation utility uses a default port number of 3182. You must use this option with the **-kmds** option to specify the port number. For details on the PATROL KMDS, see the *PATROL Knowledge Module Deployment Server Manager User Guide*.

Syntax

```
./setup.sh -kmds -kmdsportnum 1590
```

Options

Any number from 1 to 65534.

-locale *locale*

This option lets you select and install only those products compatible with the locale (language) that you specify. You can specify only one locale. The installation utility will filter the list of products that will be displayed in the Select Products and Components to Install window to display only those products that are either specific to the locale that you specify or that do not have a locale designation.

If you do not specify an option, then the locale from the system on which you are running the installation utility is used. If the system locale is not supported by the installation utility, then the English locale, en_US, is used. This option does not change the language of the text displayed in the installation utility. The installation utility will run in English regardless of the system locale or the -locale option that you enter except as noted. In addition, you will be able to input only English characters.

Note

If you set the -locale option to be the same as the system locale, you will install the appropriate products and language resource files, but the installation utility will run in either English or the system locale language and will accept input in either English or the system locale language.

Syntax

```
./setup.sh -locale en_US
```

Options

Language	Option
English	en_US
Traditional Chinese	zh_TW
Simplified Chinese	zh_CN
Korean	ko_KR
Japanese	ja_JP

-port *portnum*

This option lets you specify a port number to use to connect to the installation Web server. Use this option if the port number to the Web server is locked, and you want to specify another open port, or if you are using the **-serveronly** command line option, and you need to open a port through a firewall. If not specified, the default value is 50001. If this port number is in use, the installation utility increases the number by one, and tries again to connect to the Web server.

Syntax

```
./setup.sh -port 3184
```

Options

Any number from 1 to 65534.

-releaseversion *version*

In a PATROL environment, this option lets you install a new KM into an existing PATROL environment.

Syntax

```
./setup.sh -releaseversion 3.4
```

Options

Option	Description
3.2	for 3.2.*x* platforms and components
3.3	for 3.3.*x* platforms and components
3.4	for 3.4.*x* platforms and components
3.5,7.1	for 3.5.*x* and 7.1.*x* platforms and components. These options should always be specified together.
7.2	for 7.2 platforms and components. This is the default for this version of the installation utility.

-repository_designator *role*

This option lets you select a system role for the products that you are installing. Products with a particular system role will be displayed in the Select Products and Components to Install window. The options that you specify vary from product to product. Valid options can be found in the **sysroles.xml** file in the **BMCINSTALL/Index** directory. If you specify this option, the System Roles window in the installation utility will not be displayed.

Syntax

```
./setup.sh -repository_designator PAT,PAA
```

Options

Depends on the products that you are installing. See the **sysroles.xml** file for valid options.

-repository_oslist *ostag*

This option lets you create an installable image on one Unix operating system and install the image on another Unix or Windows operating system.

Note

You cannot create an installable image that can be installed on both Windows and Unix computers. You must create two separate images, one for Windows platforms and one for Unix platforms.

Syntax

```
./setup.sh -repository_oslist aix_41,hpux_1164
```

where the operating system tag that you specify is the valid operating system tag required by the installation utility to create an image that can be installed on a specific operating system. You must specify a tag for each operating system on which you want the image to install. Some operating systems may require two tags to package and install all components required by the products in the image.

Options

Table 3-4, on page 3-26 lists the tags that you must enter for each Unix operating system supported by the installation utility. Table 3-2, on page 3-11 lists the tags that you must enter for each Windows operating system supported by the installation utility.

Table 3-4 Operating System Tags for Creating an Installable Image for Unix Platforms (Part 1 of 2)

Target Operating System	Supported Versions	Valid -repository_oslist tags required
AIX (32-bit)	4.3.2 4.3.3	aix_41
AIX (64-bit)	4.3.2 4.3.3	aix_4364
AIX (32-bit)	5.1	aix_5132
AIX (64-bit with 32-bit kernel)	5.1	aix_5164, aix_513264
AIX (64-bit)	5.1	aix_5164
AIX (32-bit)	5.2	aix_5232
AIX (64-bit with 32-bit kernel)	5.2	aix_5264, aix_523264
AIX (64-bit)	5.2	aix_5264
HPUX	10.20	hpux_10.0, hpux_1020
HPUX (32-bit)	11.0	hpux_10.0, hpux_1132
HPUX (64-bit)	11.0	hpux_1164
HPUX (32-bit)	11i (B11.11)	hpux_10.0, hpux_11.11_32
HPUX (64-bit)	11i (B11.11)	hpux_1164, hpux_11.11_64
Linux Red Hat	6.1	linux_22, linux_rh_61
Linux Red Hat	6.2	linux_22, linux_rh_62
Linux Red Hat	7.0	linux_22, linux_rh_70
Linux Red Hat	7.1	linux_24, linux_rh_71
Linux Red Hat	7.2 7.3 Advanced Server 2.1	linux_24, linux_rh_72
Linux Red Hat (31-bit)	7.2 (zSeries)	linux390_24, s390_rh_72
Linux Suse	6.3	linux_22, linux_rh_61
Linux Suse	6.4 7.0	linux_22, linux_rh_62

Table 3-4 Operating System Tags for Creating an Installable Image for Unix Platforms (Part 2 of 2)

Target Operating System	Supported Versions	Valid -repository_oslist tags required
Linux Suse	7.1 7.2 7.3 8.0	linux_24, linux_suse_71
Linux Suse (31-bit)	Enterprise Server 7.0 (zSeries)	linux390, s390_suse_70
Linux Suse (31-bit)	Enterprise Server 7.2 (zSeries)	linux390_24, s390_suse_72
Linux Suse (64-bit)	Enterprise Server 7.2 (zSeries)	linux390_24, s390x_suse_72
Linux for s/390		linux390
Reliant Unix (64-bit)	5.4.4	reliant, reliant_544
Reliant Unix (64-bit)	5.4.5	reliant, reliant_545
SINIX	5.4.3	sinix
Solaris	2.5.1	solaris.25
Solaris	2.6	solaris.26
Solaris (32-bit)	7	solaris.2732
Solaris (64-bit)	7	solaris.2764
Solaris (32-bit)	8	solaris.2832
Solaris (64-bit)	8	solaris.2864
Solaris (32-bit)	9	solaris.2932
Solaris (64-bit)	9	solaris.2964
Tru64	4.0F 4.0G	dec_osf1.4
Tru64	5.0A	dec_osf1_5.0
Tru64	5.1 5.1A	dec_osf1_5.1
DYNIX ptx	4.5.2	sequent_4.5
DYNIX ptx	4.6.1	sequent_4.6

Example

To create an installable image on a computer running AIX 4.3.2 to be installed on AIX 4.3.2 (32-bit) and Solaris 2.51, HPUX 10.20, and Red Hat Linux 6.1, you would enter

./setup.sh -repository_oslist aix_41,solaris.25, hpux_10.0,hpux_1020,linux_22,linux_rh_61

-serveronly

This option lets you start the installation Web server on one computer, then connect to that Web server using a browser on another computer. Use this option if you do not have a browser on the computer where you want to install products. When you launch the installation utility with this command line option, the installation Web server is started, and a message box is displayed that shows a URL. On the computer with the browser, start the browser and enter this URL to connect to the Web server.

Warning

The **-serveronly** command line option is not secure over a network and using it in an unsecured network environment could result in security violations. If this is an issue for your environment, you may want to consider either performing only local installations or creating an installable product image that can be sent to a remote computer and installed on it locally, rather than installing over an unsecured network. For details on creating an installable image, see “Creating, Distributing, and Installing Installable Images” on page 2-13.

Syntax

```
./setup.sh -serveronly
```

Options

None.

-timeout *seconds*

This option lets you specify the number of seconds that the installation utility will wait to connect to the installation Web server.

Syntax

```
./setup.sh -timeout 120
```

Options

Any number from 120 to 500.

-trace

This option lets you record detailed information about what's happening in the installation utility GUI during a product installation. This information is added to the beginning of the standard log file. You can select to view the standard log file from the installation utility when the installation is complete.

For information where to find installation log files, see "Locating Log Files" on page 2-27.

Syntax

```
./setup.sh -trace
```

Options

None.

-v

This option displays a dialog box with the version number for the installation utility but does not launch the installation utility.

Syntax

```
./setup.sh -v
```

Options

None.

Configuring Products

This chapter describes the configuration of products after installation. It includes the following topics:

Configuring the Installed Products

After installing PATROL, you may need to do a certain amount of configuration to enable monitoring and viewing of data. Usually, operating-system KMs are self-configuring and require no setup on your part. However, many other KMs do need to be configured; see the getting started guides for the products that you are installing.

The explanations in this section assume you will use a PATROL Developer Console to perform this configuration. However, having a developer console is not essential. As an alternative, you could use the PATROL Configuration Tool, which performs a limited set of configuration functions for agents and KMs.

To use a developer console to complete the configuration, you will need to

- start a PATROL Developer Console
- connect the console to agent machines (Add Hosts)
- load KMs into memory (Load KMs)
- perform any required configuration to make the KMs operable
- preload the KMs to allow the PATROL Agent to run autonomously, meaning that the agent will monitor and manage your system without having a console connected to it
- disable the KMs to temporarily or permanently block the PATROL Agent from loading them.

Note

This section presents summary information only. For detailed explanations, see the user guide for your PATROL console platform.

Configuring PATROL Agents and Consoles for Unix

Note

This procedure is applicable only for PATROL Consoles, PATROL Agents, and PATROL Event Managers installed on computers running under a Unix operating system.

If you provide the root password for each system where PATROL is installed, the installation utility configures and starts the PATROL Agents and configures the PATROL Consoles.

The **configure.sh** script automates the process of identifying the PATROL Consoles and PATROL Agents that should be active on your hardware. You must run **configure.sh** for every agent, console, and event manager that you intend to activate but that the installation utility did not configure. The installation utility places the configuration script on each computer as it installs the PATROL products.

Running the Configuration Script on a Unix Computer

Summary: This task describes how to run the configuration script to configure the PATROL Consoles and Agents on a Unix computer.

Before You Begin

To complete this procedure, you must know the root password for each computer that has PATROL products that you want to configure.

Restriction

You cannot execute the configuration script from an NFS-mounted directory if the root account has not been granted root access privileges on the NFS server.

You must run the configuration script on each computer on which you want to configure PATROL products.

To Run the Configuration Script

Step 1 Type the following command and press **Return** to log on as the root user:

% su

On some systems, use the following alternative command:

% su -

The operating system prompts you for a password.

Step 2 Type the password for root and press **Return**.

Step 3 Use the cd command to change the current directory to the directory where the PATROL products were installed. (For example, **cd /users/patrol/PATROL**.)

Step 4 Type the following command and press **Return**.

#./configure.sh

The configure script sets the user ID to root for the PATROL Console, PATROL Agent, and PATROL Event Manager Console executables as applicable.

PATROL Environment Variables

When you use the startup scripts for the PATROL Agent and Consoles, the scripts set the required environment variables. Some of the utilities provided with PATROL do not have the startup scripts. The PATROL environment variables must be set properly to use the following PATROL utilities:

- PatrolCli
- pconfig
- psl

Setting PATROL Environment Variables

Summary: This task describes how to run a PATROL script to set environment variables for PATROL utilities.

To Set PATROL Environment Variables

Step 1 Change directories (cd) to the **$PATROL_HOME** directory.

Step 2 Follow the appropriate procedure.

- For Korn or Bourne shells, type the following command and press **Enter**.

  . . /patrolrc.sh

- For C shells, type the following command and press **Enter**.

  source ./patrolrc

The script sets the required environment variables.

Supplying License Information

PATROL products are installed with a 30-day demonstration license. When you install PATROL as a trial, you do not enter any passwords or license information. To use the product after 30 days, you must either extend the demonstration license or install a permanent license. Your sales representative or the Contract Administration department will supply the information you need when you purchase a permanent license.

The first time you start a PATROL Classic Console after your trial period expires, the PATROL License dialog box is displayed. Alternatively, you can display this dialog box at any time by choosing **Options => License** in the PATROL Console main window.

To activate your permanent license, enter the required information exactly as it was given to you by BMC Software:

PATROL License Field	What You Type . . .
Licensee	company name
Expiration Date [dd-mmm-yyyy]	leave blank for a permanent license
Number of console licenses	number of PATROL Consoles stated by BMC Software Contracts Administration
Number of agent licenses	number of PATROL Agents stated by BMC Software Contracts Administration
Password	password provided by BMC Software Contracts Administration

Note

Your product license password is validated based on the *exact* information you supply in the License dialog box. If you do not enter this information correctly, you will receive an error message.

You might be required to enter this information multiple times if you are given more than one password for the PATROL products you have purchased.

If the PATROL Console is installed on a Unix computer, and you have a PATROL Agent installed on a Windows NT 4.0 or Windows 2000 computer, you may need to copy the **license** file from the computer with the console to **%PATROL_HOME%\lib** on the computer with the agent. Distribute the **license.*hostname*** file from a computer with a PATROL Console to each computer with a PATROL Agent. You must remove the hostname file extension after you distribute the license file or the agent will be unable to find the file. You can use ftp or the xpconfig utility to distribute the license on Unix platforms. See the *PATROL Agent Reference Manual* for more information.

Setting Baselines to Begin Monitoring Your Environment

Once you have installed the products, you can begin using them to monitor applications and other items in your environment. The following sections describe the recommended approach for creating a baseline and for determining baseline parameters and thresholds.

Creating a Baseline Functionality Plan

BMC Software recommends building a baseline with all alarms inactivated for all KMs except the PATROL Agent Application Class. This approach allows you to give priority to setting thresholds for critical parameters first.

However, if you have immediate pay-back objectives that need to be addressed as soon as PATROL is installed, implement these objectives as part of the baseline used in the initial rollout. These immediate pay-back tasks should be highly scrutinized, with an objective of addressing the top three to five tasks only.

Determine which objectives fall into the immediate pay-back category by asking, “If we do this, will it justify our PATROL purchase?” Most businesses have a relatively small list of goals that they want PATROL to accomplish at the start; if these are met, they feel that their expenditure on PATROL was warranted.

Once you develop the Baseline Functionality Plan, you might consider these tips:

- Make the KM parameter thresholds as simple as they can be to still support your business requirements.
- Set thresholds to limit the number of warnings and alarms and to accommodate critical business issues in the baseline distribution.
- Focus on the critical business issues associated with the warnings and alarms that are turned on.
- Do not allow alarms to occur until you understand the PATROL product and your environment completely.
- Capture history (the PATROL parameter data points) on an ongoing basis so that you can make the best decisions on threshold values and future changes.

When you install a new version of PATROL, you must transfer the KM customizations you made to the current version of PATROL to the new version. This process is referred to as migration. Consult the *PATROL Migration Tools User Guide* to learn recommendations for customizing your KMs in a manner that will make future migration efforts easier.

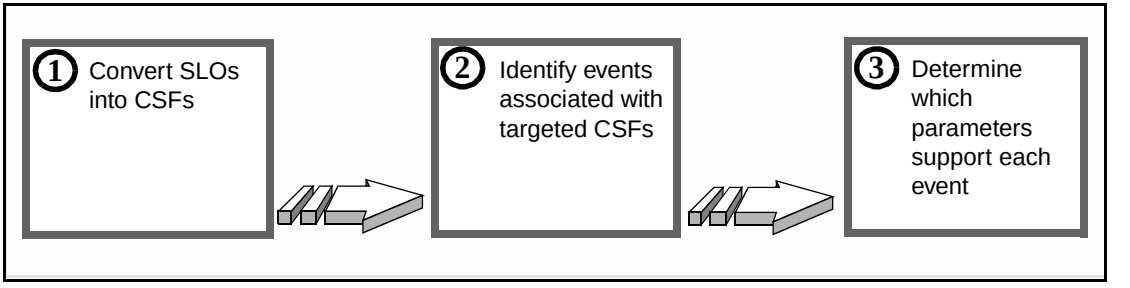
Determining Baseline Parameters and Thresholds

The PATROL policy-planning methodology specifies that you determine baseline parameters and thresholds by considering your enterprise Service Level Objectives (SLOs). You then convert these parameters and thresholds into a summary list of Critical Success Factors (CSFs).

Next you select specific targets from CSFs and, for each specifically targeted CSF, determine the associated events. Finally, evaluate the parameters to determine which ones support each event.

The steps for establishing baseline parameters and thresholds are summarized in Figure 4-1.

Figure 4-1 Steps to Establish Baseline Parameters and Thresholds



Integration Plan

If your implementation of PATROL includes communication with third-party products for event management or distribution, you must have an integration plan. The following issues are associated with integrating existing applications with PATROL:

- communication protocol
- filtering of event messages
- recovery action ownership
- enterprise management integration
  - — SNMP integration
    - reliability of delivery
    - some ability to code or “tokenize” packets

5

Upgrading to a New Version of PATROL

This chapter provides basic information you need to upgrade to a new version of PATROL while preserving the customizations in your current installation. It includes recommended workflows and strategies for streamlining this process.

For more detailed information on migrating customizations, see the *PATROL Migration Tools User Guide*.

Upgrading and Migrating: Basic Principles

The fact that PATROL can be fully customized to suit your environment and goals is one of its main strengths. However, it also means that when you upgrade to a new version of PATROL, you have to take care to preserve all the customizations you have made to your current version.

Migration is the process of transferring customizations from an earlier version of PATROL to a new version. BMC Software provides tools to automate the migration process as much as practical.

Performing a migration procedure is not recommended for users that are unfamiliar with PATROL. Be sure that you review the *PATROL Migration Tools User Guide* thoroughly before you migrate your customizations.

How Customizations Can Be Preserved During Upgrade

The customizations you make in PATROL fall into four broad categories:

Customizations to	Are preserved by
console desktop layouts user preferences list of loaded KMs list of connected agents	over-the-top installation of the PATROL 3 consoles migrating with the PATROL Console Migration Tool to the PATROL 7.*x* consoles; see the *PATROL Central Operator – Microsoft Windows Edition Getting Started* or the *PATROL Central Operator – Web Edition Getting Started*
agent agent configuration files parameter history files event history files Standard Event Catalog	over-the-top installation

Customizations to	Are preserved by
Knowledge Modules modifications to **.km** files shipped by BMC software	migrating with Merge Tool
new **.km** files created by user	over-the-top installation
PATROL Script Language modifications to **.psl** files shipped by BMC Software	manually re-creating after installation
new **.psl** files created by user	over-the-top installation

For a list of all the files where customizations can be stored, see the *PATROL Migration Tools User Guide*.

Tools Required for Migration

The following table lists the tools that you can use to perform a migration procedure. For more information, see the *PATROL Migration Tools User Guide*.

Table 5-1 Tools for Migration (Part 1 of 2)

Tool	Function
Migration probe	compares the KMs you have installed with base versions shipped by BMC Software to find the closest matches
Merge tool	determines the differences between your modified KM and the base KM; maps those differences to the new version of the KM you are installing to produce a “merged KM” that incorporates all your customizations
KM archive	contains key files for multiple versions of each KM that have been shipped by BMC Software (the base KMs); used by the probe to identify which base KM most closely resembles your modified KM

Table 5-1 Tools for Migration (Part 2 of 2)

Tool	Function
pslsearch	scans files for illegal use of PSL keywords
kmtool	used to parse KMs and to generate a variety of reports about KMs; useful for verifying that merged KMs contain all your customizations
PEP (PATROL Environment Probe)	provides basic information about the current installation, such as value for **%PATROL_HOME%** and **%PATROL_CACHE%**; available only on Windows

Using a Test Computer for First Upgrade

PATROL is a system monitoring product and therefore installs components that interface with your system at the system level. If you are not thoroughly familiar with PATROL, installing it directly into a production environment could result in undesirable consequences.

Therefore, BMC Software strongly recommends that you install the new version first in a test environment or lab situation.

Make sure that the test computer replicates all the essential components of your production environment so you can validate the installation reliably.

Backing Up Your Installation

As a precaution, you should always back up the current PATROL installation before you start to install a new version. In particular, installing the new version of the product can overwrite the customized files you already have. Although you could take many approaches to avoid this problem, the safest, quickest method is to do a full backup of the directories where PATROL executables and data are stored.

For Unix platforms, you should back up the following directories:

$BMC_ROOT (which includes **$PATROL_HOME**)
$PATROL_CACHE on classic console
/etc/patrol.d
/etc/bgs

For Windows platforms, you should back up the following directories:

%PATROL_HOME%
%PATROL_CACHE% on classic console

The **PATROL_HOME** directories contain PATROL binaries, knowledge, sounds, images, application defaults, help, utilities, and parameter histories. The **PATROL_CACHE** directories reside on the console computer and are where the PATROL Console session changes are stored. By default, **PATROL_CACHE** is located in **%HOMEDRIVE%%HOMEPATH%\patrol** for Windows environments and in **$HOME/patrol** for Unix environments, where **$HOME** is the home directory of the user who starts the console.

In a Microsoft Windows environment, you can use the PATROL Environment Probe (PEP) to determine how these variables are set. To start PEP, select **Start => Programs => BMC PATROL => PATROL Environment Probe**.

In addition, if you have any PATROL data stored outside these directories, be sure to back it up.

Installation Checklist for a Product Upgrade

Use the checklist below to determine if you have all of the information you need before you perform a product upgrade.

- All the items listed in “Installation Checklist for First Time Installation” on page 2-6 also apply to an upgrade and have been completed.

- You have gathered the following information about the current installation:

  — directories where PATROL products are installed
  — account and port number used for PATROL Agents
  — account used for previously installed products

- You have checked the documentation for each KM to see

  — which KM versions can be migrated with merge tool

  — if any configuration settings must be removed before installing the new version

  — if any services associated with the KM must be shut down before installing the new products

  — the name of the merge map file to use for this KM

  — if any application classes have been added, deleted, or renamed in the new KM

  — if any configuration is required after upgrading to the new version

Over-the-Top Installation

Note

Over-the-top installation is valid only for the PATROL Agent and the PATROL Console.

Installing a new version of PATROL on top of an existing PATROL installation will automatically preserve customizations to the agent and console, including

- console desktop layouts and preferences
- agent configurations
- agent parameter history files
- agent event history files
- Standard Event Catalog
- the PATROL user roles file (**ptrlroles.txt** or **patrol.conf**)

In addition, an over-the-top installation preserves

- the PATROL license file
- KM files that were created in-house, not shipped by BMC Software
- PSL files that were created in-house, not shipped by BMC Software
- event catalog files that were created in-house, not shipped by BMC Software

To take advantage of an over-the-top installation, you must specify the same settings and default values that were used for the current installation. Before you begin, gather the following information:

- installation directory for PATROL Agent and Console
- default account for PATROL Agent and Console
- port number for PATROL Agent

If you do not do an over-the-top installation to install a new version of the PATROL Agent, you will have to migrate your agent and console customizations manually to the new versions of the PATROL Agent and Console that you installed in a different directory. For more information on migrating agents and consoles manually, see the *PATROL Migration Tools User Guide*.

Table 5-2 shows the platforms and PATROL versions that are supported for installing new PATROL products over the top of existing products.

Note

Over-the-top installation for Windows 2000 platforms is not supported for versions of PATROL earlier than 3.4.00.

Table 5-2 Supported Platforms for Over-The-Top Installation

Platform	PATROL 3.3.00 and later	PATROL 3.4.00
Windows 2000 Intel		x
Windows NT 4.0 Intel, SP4 and SP5	x	x
Windows NT 4.0 Intel, SP6[a]	x	x
Windows NT 4.0 Intel, TSE SP3, SP4, and SP5[a]	x	x

[a] This platform is supported for PATROL 3.3.01 only.

For more information on migrating your KM customizations, see the *PATROL Migration Tools User Guide*.

Locating Your PATROL Directories

PATROL executables and data are typically stored in two directories:

- **$PATROL_HOME**
- **$PATROL_CACHE**

Note

$PATROL_CACHE exists only on console machines and may be different for each console user.

$PATROL_HOME is set during installation. **$PATROL_CACHE** is not set automatically; it must be set explicitly by the user. If **$PATROL_CACHE** is not defined, the default location **$HOME\patrol** (Windows) or **$HOME/patrol** (Unix) is used for storing the console user's customizations to PATROL.

Checking the Settings on Windows

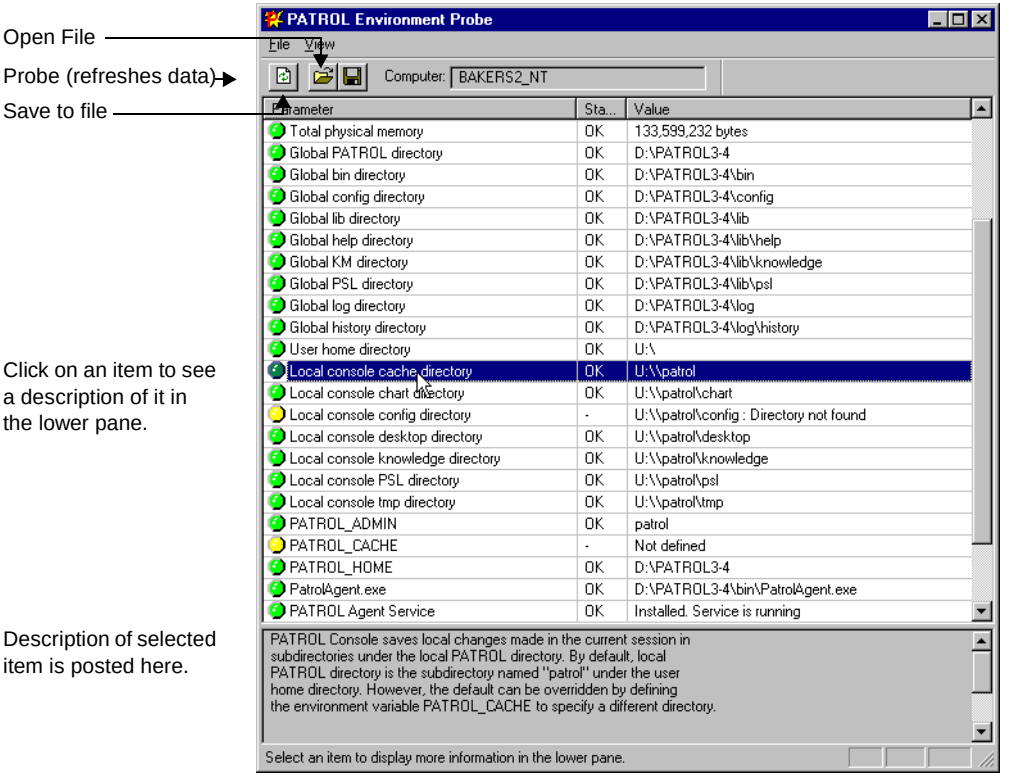
To determine how **%PATROL_HOME%** and **%PATROL_CACHE%** are currently set on a Windows machine, use either of the following methods:

- Check the **Environment** tab on the Systems Properties dialog box (**Start** => **Settings** => **Control Panel** => **System** => **Environment**).

- Run the PEP (**Start** => **Programs** => **BMC PATROL** => **PATROL Environment Probe**).

The PEP provides a great deal of information about your PATROL installation. You can save this information to a file for later reference or open a saved file to compare former settings with the current values.

Figure 5-1 PATROL Environment Probe



In the probe, **Global PATROL directory** is the same as **PATROL_HOME**, and **Local console cache directory** is the same as **PATROL_CACHE**.

In the example above, **PATROL_CACHE** has a value of **Not defined** because the user did not explicitly set this variable, so the default location is used for storing customizations.

Checking the Settings on Unix

To determine how **$PATROL_HOME** and **$PATROL_CACHE** are currently set on a Unix machine, enter either of the following commands at the system prompt:

>env | grep $*VARIABLE_NAME*

or

>echo $*VARIABLE_NAME*

Strategies for Managing Customizations

Adopting some simple management policies will help you use and maintain customizations to PATROL in the most efficient manner. These *best practices* were gleaned from the experience of BMC Software Support and Professional Services.

Customizations to the PATROL Agent

If you want to apply the same configuration settings to a number of PATROL Agents, create a simple ASCII change file (**.cfg**) and distribute it to all the agent machines by using the command-line utility pconfig. On each machine, the change file is used in combination with the default configuration file shipped by BMC Software to configure the agent.

This approach offers the following advantages:

- The change file serves as a record of your customizations.
- The change file can be applied to new agents when they are installed.
- The change file is preserved during an over-the-top installation.

See the *PATROL Agent Reference Manual* for more information on using pconfig.

Another approach is to edit the **config.default** file and distribute the edited file to each agent machine. An over-the-top installation will preserve your customizations to the **config.default** when you upgrade to a later version of PATROL.

Customizations to Knowledge Modules

The key to managing KM customizations is to keep the amount of variation to a minimum and to provide a mechanism for keeping track of what you have in your environment.

Limit the Amount of Variations

A typical enterprise should have only a small number of unique versions of any given KM. Limiting the number of variations like this makes it easier for you to control what is in your environment and reduces the amount of migration you have to perform when you upgrade. For example, you might have customized PATROL for Microsoft Exchange Server in two different ways: version A is applied to a set of 200 servers and version B is applied to a set of 500 servers. When you upgrade PATROL, you will only need to perform the migration twice.

Consider Using Operator Overrides

BMC Software recommends customizing the KM for global changes and using operator overrides for local changes. For example, if you want the same alarm ranges used for CPU usage on all hosts except five critical servers, specify the common settings when you customize the NT_CPU KM and then apply local overrides to the five exceptions.

This approach offers several advantages to the alternative, which is to customize the KM globally once and then customize it locally for each of the special instances.

- Operator overrides are stored in the agent configuration files and thus are automatically preserved when you later do an over-the-top installation of a new version of PATROL, whereas the KM customizations have to be migrated.

- Operator overrides can be applied to a single application instance or to all instances. Localizations to a **.km** file must be made on an instance-by-instance basis; as a result, they can be time-consuming to make and can increase the size of the **.km** file significantly.

To make overrides, you must be running an operator console with the appropriate user role defined (that is, the *allowtuning* variable has been turned on in the **ptrlroles.txt** file or the *allowoverrideparameter* has been turned on in the **patrol.conf** file, depending on your version of PATROL). You can then make changes to the following properties:

- application discovery cycle
- polling interval
- history retention span
- border range
- alarm thresholds

For more information, see the *PATROL Console for Unix User Guide* or the *PATROL Console for Microsoft Windows User Guide – Customizing PATROL Volume 3*.

Customizations to PSL Code

Any modifications you make to **.psl** files that were shipped by BMC Software are lost when you install the new version of the product. On the other hand, new **.psl** files that you create in-house are preserved by an over-the-top installation. This section deals exclusively with changes that you may have made to PSL code shipped by BMC Software.

In addition, changes to PSL code that are embedded within the **.km** file are not brought forward by the merge tool. But references to external **.psl** files are preserved and incorporated in the new version of the KM.

For these reasons, it is best to adopt the following practices:

- Avoid making changes to PSL code delivered by BMC Software if at all possible. Such changes are not retained during the migration process and must be manually re-created.

- If you must change BMC Software code, keep a copy of the original intact.

- If you add PSL code to a KM, store it in a separate **.psl** file and reference that file within the **.km** file. Do not embed PSL code within the **.km** file. See Appendix C in the *PATROL Migration Tools User Guide*.

- Keep a record of the changes you have made and the reasons for those changes. Comments within the code can be very helpful later.

Customizations to Event Catalogs

If you need to add or modify event classes, you can customize the Standard Event Catalog (**StdEvents.ctg**) or the application event catalogs (***.ctg**) for KMs that are shipped by BMC Software.

- Customizations to the Standard Event Catalog are preserved by an over-the-top installation of the PATROL Agent. However, if you later install PATROL Alarm Manager, that product installs its own version of **StdEvents.ctg**, and any customizations you have made to the Standard Event Catalog are lost.

- Customizations to an event catalog for a specific application are lost when you later install a new version of that KM. You must re-create the customizations.

Alternatively, you can create a custom event catalog that will be preserved when you later upgrade to a new version of PATROL. To do so, you must

- first create a new application class
- define an event catalog for that “dummy” application class
- apply your custom event catalog to KMs shipped by BMC Software (that is, define what conditions trigger a certain type of event in your new catalog)

When you customize a KM, be sure to store the PSL code you write in a separate **.psl** file; do not save it within the **.km** file. Because **.psl** files you create are preserved by an over-the-top installation, your custom event catalog and the PSL code defining the conditions that trigger various types of events will remain intact. The references to those **.psl** files within the **.km** file are maintained when you merge your modified KM with the new version. For more information on creating application classes and events, see the user guide for your PATROL Console.

Uninstalling Products

This chapter describes how to uninstall BMC Software products. It includes the following topics:

Uninstalling BMC Software Products

You can use the installation utility in uninstall mode to select and uninstall only those products that were installed with this version of the installation utility. Products installed with a previous version of the installation program must use that version's uninstall utility.

Warning

Performing the tasks described in this section may remove files needed by a previous version of the installation program to uninstall products installed with that version. Likewise, if you use a previous version of the installation program to uninstall products, you may remove files needed by this version of the installation utility to perform the uninstall tasks.

Note

Before you can uninstall PATROL products, you may need to stop any PATROL processes that are running on the computers where you want to uninstall PATROL. For information on stopping PATROL processes, see the *PATROL for Unix Getting Started*, the *PATROL Agent Reference Manual*, and the *PATROL Knowledge Module Deployment Server Manager User Guide* .

Uninstalling Products in a Windows Environment

Summary: You have several options for uninstalling BMC Software products depending on what you want to uninstall. The following procedures describe how to uninstall products in a Windows environment.

To Uninstall Individual Products

Step 1 From the **Uninstall** directory in your BMC Software product installation directory, double-click **uninstall.exe** to launch the installation utility in uninstall mode.

Note

You can optionally launch the installation utility in uninstall mode by choosing **Start => Settings => Control Panel => Add/Remove Programs** and double-clicking on **BMC Software Tools** in the **Add/Remove Programs Properties** dialog box.

The Welcome window is displayed. Click **Next**.

Step 2 Select the installation directory from which you want to remove a product. Click **Next**.

Step 3 Select the product or products that you want to uninstall. Click **Next**.

Step 4 Review your selections and click **Uninstall**.

Once the uninstall is complete, a window is displayed that tells you the status of the uninstall.

To Uninstall All Products but Leave Log Files and Configuration Files

Step 1 Uninstall all products as described in "To Uninstall Individual Products."

Step 2 Locate the **uninstall.ctl** file in the **<BMC Products Installation directory>\Uninstall\Install\instdata** directory.

Step 3 Open the **uninstall.ctl** file in a text editor such as Notepad and edit the /*BMC/Base* variable to specify the name of the directory from which you removed the products in step 1.

Step 4 Open a command prompt.

Step 5 Change to the **<BMC Products Installation directory>\Uninstall\ Install\ instbin** directory.

Step 6 Enter the following command:

thorinst.exe -uninstall ***path to control file*** **-log** ***path to log file*** **-output** ***path to output log file***

where the **-log** and **-output** options let you specify a location for a standard log file and an output log file. The standard log file contains all installation status information, and the output log file contains messages on the progress of the installation that are normally sent to standard output. The *path to log file* and *path to output log file* variables can be any valid path and file name (with a .txt extension) that you specify. If any of the paths (to control file, log file, or output log file) include spaces, you must enclose them with quotes.

For example, if **C:\Program Files\BMC Software** is your product installation directory, you would change to **C:\Program Files\BMC Software\Uninstall\ Install\instbin** directory and enter the following:

thorinst.exe -uninstall "C:\Program Files\BMC Software\Uninstall\Install\instdata\uninstall.ctl" -log Z:\NetworkLogs\MyLogs.txt -output Z:\NetworkLogs\MyLogs.out

This task removes all installation files and directories except those used by the utility at the time the uninstall is performed. Log files, configuration files, and user modified files are also retained.

To Uninstall All Products and Associated Log Files and Configuration Files

Step 1 Uninstall all products as described in "To Uninstall Individual Products."

Step 2 Locate the **uninstall-all.ctl** file in the **<BMC Products Installation directory>\Uninstall\Install\instdata** directory.

Step 3 Open the **uninstall-all.ctl** file in a text editor such as Notepad and edit the */BMC/Base* variable to specify the name of the directory from which you removed the products in step 1.

Step 4 Open a command prompt.

Step 5 Change to the **<BMC Products Installation directory>\Uninstall\ Install\ instbin** directory.

Step 6 Enter the following command:

thorinst.exe -uninstall ***path to control file*** **-log** ***path to log file*** **-output** ***path to output log file***

where the **-log** and **-output** options let you specify a location for a standard log file and an output log file. The standard log file contains all installation status information, and the output log file contains messages on the progress of the installation that are normally sent to standard output. The *path to log file* and *path to output log file* variables can be any valid path and file name (with a .txt extension) that you specify. If the path includes spaces, you must enclose it with quotes.

For example, if **C:\Program Files\BMC Software** is your product installation directory, you would change to **C:\Program Files\BMC Software\Uninstall\ Install\instbin** directory and enter the following:

thorinst.exe -uninstall "C:\Program Files\BMC Software\Uninstall\Install\instdata\uninstall-all.ctl" -log Z:\NetworkLogs\MyLogs.txt -output Z:\NetworkLogs\MyLogs.out

This task removes all installation files and directories. The files used to perform the uninstall will be marked for deletion and will be removed when the computer on which the products were uninstalled is rebooted.

Uninstalling Products in a Unix Environment

Summary: The following procedure describes how to uninstall BMC Software products in a Unix environment.

To Uninstall Individual Products

Step 1 Change to the **Uninstall** directory in your BMC Software product installation directory and enter the following command to launch the installation utility in uninstall mode:

./uninstall.sh

The Welcome window is displayed. Click **Next**.

Step 2 Select the installation directory from which you want to remove a product. Click **Next**.

Step 3 Select the product or products that you want to uninstall. Click **Next**.

Step 4 Review your selections and click **Uninstall**.

Once the uninstall is complete, a window is displayed that tells you the status of the uninstall.

A

PATROL Installation Directories

This appendix describes the basic structure of the PATROL installation directories for Windows and Unix.

Product Installation Directory

When you install products, you will need to provide the name of a directory into which the products that you select will be installed. The installation utility provides a default directory that you can use, or you can enter a new directory.

Warning

Product installation directories are stored in installation utility history files as full path names; therefore, do not rename the product installation directory after you install products, because the installation utility will be unable to find the renamed directory if you uninstall products.

Overview of the Installation Directory Structure for Windows

By default, the installation utility uses **c:\Program Files\BMC Software** as the product installation directory. When you install products, the installation utility creates a subdirectory in the product installation directory for each product that you install and the following additional subdirectories that store information required by the installation utility:

- **Install\insthist**—stores files that contain installation utility history information, such as which products you installed during a particular installation session
- **itools**—stores utilities that may be used by the products that you install
- **Uninstall\Install\instbase**—stores the Perl binaries and the Perl Web server code; Perl is used by installation utility to install products
- **Uninstall\Install\instbin**—stores the installation engine binaries and installation tools such as ctltool
- **Uninstall\Install\instcommon**—stores the xml files that are used to format and display the standard installation utility windows
- **Uninstall\Install\instdata**—stores default text files that control the order of the list of products that you can select to install and the order in which the products are installed, and that list the operating systems that are recognized by the installation utility

The **PATROL** product directory contains subdirectories for binaries, knowledge, images, application defaults, help files, and utilities.

Overview of the Installation Directory Structure for Unix

By default, the installation utility uses **/opt/bmc** as the product installation directory. When you install products, the installation utility creates a subdirectory in the product installation directory for each product that you install and the following additional subdirectories that store information required by the installation utility:

- **Install/insthist**—stores files that contain installation utility history information, such as which products you installed during a particular installation session
- **itools**—stores utilities that may be used by the products that you install
- **Uninstall/Install/instbase**—stores the Perl binaries and the Perl Web server code; Perl is used by installation utility to install products
- **Uninstall/Install/instbin**—stores the installation engine binaries and installation tools such as ctltool
- **Uninstall/Install/instcommon**—stores the xml files that are used to format and display the standard installation utility windows
- **Uninstall/Install/instdata**—stores default text files that control the order of the list of products that you can select to install and the order in which the products are installed, and that list the operating systems that are recognized by the installation utility

Note

Be sure you have write permissions for **/opt/BMC** before you begin to install products or the installation will fail.

The **PATROL** product directory contains subdirectories for binaries, knowledge, images, application defaults, help files, and utilities.

Using PATROL with Firewalls

This appendix describes how to use PATROL in environments that have a firewall between the PATROL Consoles and PATROL Agents or between the PATROL KMDS and other PATROL components. It is intended for system administrators who can tailor their site environment to make effective use of PATROL products. Depending on your type of firewall and the location of your PATROL Consoles, Agents, and PATROL KMDS relative to your firewall, you might need to modify your firewall protection to use PATROL.

This chapter presents the following topics:

TCP and UDP Communications Basics

PATROL provides a choice of two transport protocols for communications between PATROL components: UDP and TCP.

- UDP is a connectionless protocol that sends independent datagrams from one host to another, much like letters in the post office. That is, the host simply puts the message onto the network with the destination address, and there is no attempt to make sure that the message arrives at the destination, or that the messages arrive in the same order in which they were sent.

- TCP is a connection-based service with two independent byte streams going in opposite directions, like a telephone system with two separate lines for communication in opposite directions. The sender receives confirmation that the message arrives at the destination, and the receiver handles them in the order in which they were sent.

A TCP or UDP connection is identified by the following four items present in each message:

- source IP address—address of the system that sent the packet

- destination IP address—address of the system to receive the packet

- source port—connection port at the source system; identifies the process that sent the packet

- destination port—connection port at the destination system; identifies the process that should receive the packet

Port numbers enable multiple processes to use TCP or UDP services on the same host.

Well-known ports are port numbers that industry has agreed to reserve for specific services such as telnet, ftp, and SMTP. These well-known ports are numbered from 1 through 1024. Port numbers greater than 1024 are not considered to be well-known ports.

Port Requirements for Installing on Unix

Installing PATROL or deploying KMs from the PATROL KMDS requires that the following ports be open:

- RNC—8160
- FTP—21
- TELNET—23

Port Requirements for Installing on Windows

Installing PATROL or deploying KMs from the PATROL KMDS requires that the following port be open:

- RNC—8160

Also, both computers must be members of the same domain. There is no port mapping. The installation utility uses TCP.

PATROL Agent and Console Communication Basics

This section examines the use of UDP and TCP communications protocols with PATROL, and gives examples of each.

The PATROL Agent configuration variable, */AgentSetup/PortConnectType*, defines whether the agent listens on the UDP protocol, the TCP protocol, or both. The default is for the agent to listen on both protocols.

UDP-Based Transport

The following sections describe different uses for UDP-based transport.

PATROL Agent Binding

The PATROL Agent normally binds to a fixed UDP and TCP port using a default port number of 3181.

However, you can control the port to which the PATROL Agent binds through use of command line options when you start the PATROL Agent. For example, the following command starts the PATROL Agent on port 3100:

PatrolAgent -p 3100

See *PATROL for Unix Getting Started* for more information about starting the PATROL Agent.

PATROL Console Binding

Normally, for UDP communication, the PATROL Console binds to the next available UDP port for return traffic, as determined by the operating system.

However, the following command line options can be used to start the PATROL Console on different ports:

Table B-1 PATROL Console Startup Arguments

Argument	Function
-lcp <port_number>	bind this port number to sockets created by xpconfig to connect to agents
-lkp <port>	bind this port number to sockets created to connect to the PATROL KMDS
-lp <port>	specific local port number to use behind a firewall
-p <port>	default port for agent connections

If you have defined a PATROL Console UDP service, then the console automatically binds to the UDP port number specified for this service.

The firewall filtering router must be configured to allow the PATROL Agents and PATROL Consoles to communicate. The exact configuration is dependent on the location of your PATROL Consoles and PATROL Agents in relation to the firewall. See “Command Line Examples” on page B-6 for more information.

A firewall using a filtering router is only marginally weakened by the addition of the PATROL filters. The source and destination port numbers are fixed. You can even further restrict the PATROL traffic allowed through the firewall by including the IP address of your PATROL Console machine in the filter. If you have several consoles, you can include the network number of the network where your PATROL Consoles are running in the filters.

TCP-Based Transport

As with the UDP-based transport, the PATROL Agent binds to a fixed TCP port number. However, as defined by standard TCP protocol, this port number is used only in the TCP connection protocol. The operating system assigns a new pair of pseudo random (ephemeral) port numbers to the connection after the connection has been established. All traffic over the connection is then addressed to these ports. This enables the TCP application to continue listening for traffic on the first port, while data (in this case, normal PATROL traffic) is being transferred over the ephemeral ports.

Since the TCP protocol does not use fixed ports for data traffic after a connection has been made, it is virtually impossible to create filters to allow only the PATROL traffic through the firewall, as discussed previously for UDP.

To use TCP with a firewall, the firewall must be “TCP-aware,” and it must be configured properly. Refer to your firewall documentation for detailed information about using the firewall with the TCP protocol.

Command Line Examples

If you intend to run the PATROL Agent configuration from a PATROL Developer Console (that is, use the MB3 **Development => Agent Configuration** choice), you also must use the **-lcp** option when you start the PATROL Console so that you force the PATROL Agent configuration process to bind to a UDP port of your choice (for example, 1989).

If you have defined a xpconfig UDP service, the PATROL Agent configuration process automatically binds to the UDP port; that is, you don't need to use the **-lcp** option in this case. For example, to start a PATROL Developer Console that will connect to one or more PATROL Agents through a firewall, type the following startup command:

Patrol -dev -lp 1988 -lcp 1989

UDP port 1988 will be used by the PATROL Console process, and UDP port 1989 will be used by the PATROL Agent configuration process.

The router must have one additional filter defined on each of its two interfaces to allow the PATROL Consoles and PATROL Agents to communicate through the firewall. Your router filter tables might look like those shown in the paragraphs that follow.

On the interface to the outside world (the PATROL Console's network), the following filter is needed:

Figure B-1 Router Port Filter—PATROL Console

```
# Allow      Source           Destination
# |Deny      IP/port/proto    IP/port/proto
    Deny     */*/*            */*/*          # Default: deny all
    Allow    */*/*            firewall/*/*   # To firewall
    Allow    */1988/UDP       */3181/UDP     # Console-> Agent
    Allow    */1989/UDP       */3181/UDP     # Agent Config-> Agent
```

On the interface to the PATROL Agent's network, the following filter is needed:

Figure B-2 Router Port Filter—PATROL Agent

```
# Allow      Source            Destination
# |Deny      IP/port/proto     IP/port/proto
    Deny     */*/*             */*/*          # Default: deny all
    Allow    firewall/*/*      */*/*          # From firewall
    Allow    */3181/UDP        */1988/UDP     # Agent-> Console
    Allow    */3181/UDP        */1989/UDP     # Agent-> Agent Config
```

Using the /etc/services File

The **/etc/services** file is a Unix system file that defines well-known ports and the services associated with those ports. The port number from one to 1024.

Since services may also be defined in either Network Information Services (NIS) or NIS+ tables, you need to know the specific location from which your system obtains network services.

If you do not use the **-p** argument when you start the PATROL Agent or PATROL Console, the PATROL Agent or PATROL Console will perform a lookup in the **/etc/services** file to see what port number should be used.

Thus, if you place the following two entries in the **/etc/services** file

```
patrolagent      2627/udp
patrolagent      2627/tcp
```

the system will start the PATROL Agent using port number 2627.

If you start a PATROL Agent, a PATROL Console, or the PATROL configuration utility without specifying a port number option, the application checks the **/etc/services** file to see if any port number is assigned to the application. If a port definition is found, the application will use that port number; otherwise, it will use the default port number. The default port number for the PATROL Agent is 3181 currently, and is a random number for the PATROL Console and for the configuration utility. The default port number for the PATROL Agent may change in the future. See the appropriate PATROL users guide for your platform for the correct default port number designation.

The startup command for the PATROL Console uses two additional arguments primarily for adapting PATROL to work with firewalls. These arguments are shown in Table B-1, "PATROL Console Startup Arguments," on page B-4. If you do not use the **-lp** or **-lcp** arguments when starting the PATROL Console, the PATROL Console will read the **/etc/services** file for the keywords *patrolconsole* and *patrolconfig*, respectively. If these services are not listed in the **/etc/services** file, the operating system will assign the next available port to the PATROL Agent and PATROL Console when they start.

Note

The **-lp** and **-lcp** command line options are only applicable if UDP is used as the connection protocol. These switches have no effect if the TCP connection protocol is used.

A sample **/etc/services** file is shown in Figure B-3. PATROL requires the service names for the PATROL Agent and PATROL Console to be exactly as shown in Figure B-3.

Figure B-3 Sample /etc/services File

```
tcpmux          1/tcp
patrolagent     27/udp      # Patrol agent port for UDP
patrolagent     2627/tcp    # Patrol agent port for TCP
patrolconsole   2628/udp    # Patrol console port
patrolconsole   2628/tcp    # Patrol console port
patrolconfig    2629/udp    # Patrol configuration port
patrolconfig    2629/tcp    # Patrol configuration port
```

Using **/etc/services** to specify port number for an application does not reserve or start an application on the specified port. It is simply states that a service will use a particular port.

When the PATROL Agent, PATROL Console, and configuration utility is started without a port number option, each service checks the **/etc/services** file to see if a port number is assigned. If a port number definition is found, the service will use that port number. Otherwise, it will use the default port number (3181 for the PATROL Agent, and random for console and configuration utility.

If port contention is a problem, there is no standard way to find out what process has a port locked. The netstat utility does not show which application is actually using the port.

Troubleshooting

This chapter describes some of the error messages you might encounter while installing PATROL products and suggests ways of resolving the problems.

Error Messages for Windows

This section contains information about specific problems or error messages that you might encounter while installing or configuring PATROL in Windows environments.

Problem: PATROL Agent service fails to run.

Solution: Start the agent interactively in debug mode. This action will cause the agent to display an error message. From a command line, type the following command:

c:\PatrolAgent

This command will not work unless the user account is set up properly. See “Setting Up An Installation Account” on page 1-12.

Problem: Commands fail to execute.

Error Message: ExecuteCommand: Couldn't execute command of type 'TYPE'

Probable Cause: The PATROL default account does not have the necessary rights to execute the command.

Solution: Perform the following steps.

1. Make sure the PATROL default account is not locked out.
2. Make sure the **cmd.exe** file is located in the **winnt\system32** directory.
3. If a local PATROL default account with the same name as a domain PATROL default account exists on the server where the agent is installed, select which account you want to use then delete the other account.

4. If you are using a domain PATROL default account, make sure the account is listed in the local Administrators group (and is listed separately) and has all seven of the following Advanced User Rights on the local computer.

   — Act as part of OS
   — Debug programs
   — Increase quotas
   — Log on as a service
   — Log on locally
   — Profile system performance
   — Replace a process level token

5. Using the PATROL default account, log onto the server that has the PATROL agent installed and stop the PatrolAgent service.

6. Check the *PATROL_ADMIN* environment variable to make sure the correct PATROL default account is listed. If the correct account is not listed, change the variable to the reflect the correct PATROL default account.

Note

If the PATROL default account is a domain account, then the domain name should be entered in front of the PATROL account name in the *PATROL_ADMIN* environment variable. For example, ***DOMAIN*\patrol**.

7. Update the PATROL Agent configuration to reflect the correct PATROL default account as follows:

   A. Click **Start => Programs => BMC PATROL => Agent Configure** to start the PATROL Agent Configuration utility.

   B. In the PATROL Agent Configuration dialog box, enter the PATROL default account in the **User Name** field.

   C. Enter the password for the PATROL default account and click **OK**.

8. Start the PatrolAgent service.

9. Verify that the PATROL default account was updated in the agent configuration by performing the following steps:

   A. On a computer running a PATROL Console, in the **%PATROL_HOME%\bin** directory, double-click **wpconfig.exe** to start the wpconfig configuration tool.

   B. Click **Tools => Get Configuration**.

   C. In the Get Configuration dialog box, enter the name of the host where the agent is running and agent port number and click **OK**.

   D. In the left tree view, select **AgentSetup**.

   E. In the list of variables in the right pane, verify that the account displayed in the **Current** column for the *defaultAccount* variable is the same account that you entered in the PATROL Agent Configuration utility.

      If the account is not the same, perform the following additional steps.

      A. Double-click **defaultAccount**.

      A. In the Modify Variable dialog box, double click the account entry under **Changing Entries**.

      B. In the Set Default Account dialog box, enter the correct PATROL default account name and password.

      C. Click **OK** to close the Set Default Account and Modify Variables dialog boxes.

Note

If the account you are entering for the *defaultAccount* variable is a domain PATROL default account, make sure that you enter the domain name and the account name; for example, ***DOMAINNAME\domainpatrolaccount*** (*DOMAINNAME* must be uppercase).

D. Click **Tools => Apply Configuration** to apply the new account and password configuration to the host.

E. Stop and restart the PatrolAgent service.

10. If you changed the *PATROL_ADMIN* environment variable, reboot the server so the change will take effect.

Problem: Unable to log on.

Error Message: Logon failure: unknown user name or bad password

Probable Cause: The PATROL Agent account does not have sufficient privileges.

Solution: Perform the following steps.

1. Make sure the PATROL default account is not locked out.

2. Make sure the **cmd.exe** file is located in the **winnt\system32** directory.

3. If a local PATROL default account with the same name as a domain PATROL default account exists on the server where the agent is installed, select which account you want to use then delete the other account.

4. If you are using a domain PATROL default account, make sure the account is listed in the local Administrators group (and is listed separately) and has all seven of the following Advanced User Rights on the local computer.

   — Act as part of OS
   — Debug programs
   — Increase quotas
   — Log on as a service
   — Log on locally
   — Profile system performance
   — Replace a process level token

5. Using the PATROL default account, log onto the server that has the PATROL agent installed and stop the PatrolAgent service.

6. Check the *PATROL_ADMIN* environment variable to make sure the correct PATROL default account is listed. If the correct account is not listed, change the variable to the reflect the correct PATROL default account.

Note

If the PATROL default account is a domain account, then the domain name should be entered in front of the PATROL account name in the *PATROL_ADMIN* environment variable. For example, ***DOMAIN*\patrol**.

7. Update the PATROL Agent configuration to reflect the correct PATROL default account as follows:

   A. Click **Start => Programs => BMC PATROL => Agent Configure** to start the PATROL Agent Configuration utility.

   B. In the PATROL Agent Configuration dialog box, enter the PATROL default account in the **User Name** field.

   C. Enter the password for the PATROL default account and click **OK**.

8. Start the PatrolAgent service.

9. Verify that the PATROL default account was updated in the agent configuration by performing the following steps:

   A. On a computer running a PATROL Console, in the **%PATROL_HOME%\bin** directory, double-click **wpconfig.exe** to start the wpconfig configuration tool.

   B. Click **Tools => Get Configuration**.

   C. In the Get Configuration dialog box, enter the name of the host where the agent is running and agent port number and click **OK**.

   D. In the left tree view, select **AgentSetup**.

E. In the list of variables in the right pane, verify that the account displayed in the **Current** column for the *defaultAccount* variable is the same account that you entered in the PATROL Agent Configuration utility.

   If the account is not the same, perform the following additional steps.

   A. Double-click **defaultAccount**.

   A. In the Modify Variable dialog box, double click the account entry under **Changing Entries**.

   B. In the Set Default Account dialog box, enter the correct PATROL default account name and password.

   C. Click **OK** to close the Set Default Account and Modify Variables dialog boxes.

Note

If the account you are entering for the *defaultAccount* variable is a domain PATROL default account, make sure that you enter the domain name and the account name; for example, ***DOMAINNAME\domainpatrolaccount*** (*DOMAINNAME* must be uppercase).

   D. Click **Tools => Apply Configuration** to apply the new account and password configuration to the host.

   E. Stop and restart the PatrolAgent service.

10. If you changed the *PATROL_ADMIN* environment variable, reboot the server so the change will take effect.

Problem: Unable to create a command shell for the system output task window.

Error Message: Couldn't execute shell '_NtTask_' as system output interactive task

Probable Cause: The PATROL Agent account is invalid.

Solution: Perform the following steps.

1. Make sure the PATROL default account is not locked out.

2. Make sure the **cmd.exe** file is located in the **winnt\system32** directory.

3. If a local PATROL default account with the same name as a domain PATROL default account exists on the server where the agent is installed, select which account you want to use then delete the other account.

4. If you are using a domain PATROL default account, make sure the account is listed in the local Administrators group (and is listed separately) and has all seven of the following Advanced User Rights on the local computer.

   — Act as part of OS
   — Debug programs
   — Increase quotas
   — Log on as a service
   — Log on locally
   — Profile system performance
   — Replace a process level token

5. Using the PATROL default account, log onto the server that has the PATROL agent installed and stop the PatrolAgent service.

6. Check the *PATROL_ADMIN* environment variable to make sure the correct PATROL default account is listed. If the correct account is not listed, change the variable to the reflect the correct PATROL default account.

Note

If the PATROL default account is a domain account, then the domain name should be entered in front of the PATROL account name in the *PATROL_ADMIN* environment variable. For example, ***DOMAIN*\patrol**.

7. Update the PATROL Agent configuration to reflect the correct PATROL default account as follows:

   A. Click **Start => Programs => BMC PATROL => Agent Configure** to start the PATROL Agent Configuration utility.

   B. In the PATROL Agent Configuration dialog box, enter the PATROL default account in the **User Name** field.

   C. Enter the password for the PATROL default account and click **OK**.

8. Start the PatrolAgent service.

9. Verify that the PATROL default account was updated in the agent configuration by performing the following steps:

   A. On a computer running a PATROL Console, in the **%PATROL_HOME%\bin** directory, double-click **wpconfig.exe** to start the wpconfig configuration tool.

   B. Click **Tools => Get Configuration**.

   C. In the Get Configuration dialog box, enter the name of the host where the agent is running and agent port number and click **OK**.

   D. In the left tree view, select **AgentSetup**.

E. In the list of variables in the right pane, verify that the account displayed in the **Current** column for the *defaultAccount* variable is the same account that you entered in the PATROL Agent Configuration utility.

   If the account is not the same, perform the following additional steps.

   A. Double-click **defaultAccount**.

   A. In the Modify Variable dialog box, double click the account entry under **Changing Entries**.

   B. In the Set Default Account dialog box, enter the correct PATROL default account name and password.

   C. Click **OK** to close the Set Default Account and Modify Variables dialog boxes.

Note

If the account you are entering for the *defaultAccount* variable is a domain PATROL default account, make sure that you enter the domain name and the account name; for example, ***DOMAINNAME\domainpatrolaccount*** (*DOMAINNAME* must be uppercase).

   D. Click **Tools => Apply Configuration** to apply the new account and password configuration to the host.

   E. Stop and restart the PatrolAgent service.

10. If you changed the *PATROL_ADMIN* environment variable, reboot the server so the change will take effect.

Problem: The agent will not start.

Error Message: Sess Init failed: err = -14/10048. Another agent is probably running on the same port

Probable Cause: Another PATROL Agent is already running on the same port, or you attempted to restart the Agent too soon after terminating it. The agent uses TCP ports for some of its communications, and due to the nature of TCP ports, it may take up to 4 minutes after the agent is terminated before all TCP ports are closed.

Problem: PATROL Knowledge Modules fail to load.

Error Message: Bad PSL script for NAME command type 'TYPE', commandClass 'CLASS'

Probable Cause: A writable temporary directory is not available. Large PSL scripts require an intermediate temporary file which the agent creates in the directory identified by one of the following environment variables: *TMP*, *TEMP*, or *PATROL_TEMP*. Verify that at least one of these environment variables exists and that the PATROL Agent account has write access to the directory(ies) specified by the environment variable(s).

Problem: The installation utility will fail if a proxy server is specified for internet connections in a supported Web browser.

Solution: Remove the proxy server connection setting or bypass it by performing the following task for your browser:

- Internet Explorer: In the browser window, select **Tools => Internet Options => Connections tab => LAN Settings => Bypass proxy server for local addresses**.

- Netscape: In the browser window, select **Edit** => **Preferences** => **Advanced** => **Proxies** => **Manual Proxy Configuration** => **View** and enter your domain in the Exceptions field.

Problem: The installation utility fails on computers running Microsoft Windows Terminal Services.

Solution: Make sure a file called **check.exe** exists in the **Windows\System32** directory. The installation utility uses this file to install products in a Terminal Services environment. If the file does not exist, you will need to copy it from another Terminal Services computer.

Problem: The following error messages are seen during a product installation:

```
javascript error - line 67, screen not defined
javascript error - line 145, setInterval is not
defined.
```

Solution: You are using a version of Netscape that is not supported by the installation utility. Use one of the following versions: 4.75, 4.76, 4.77, or 4.78.

Problem: The installation utility Help does not display properly; for example, the Contents, Index, and Search tabs are not displayed.

Solution: To properly display the Help

- the Web browser that you are using to run the installation utility must be Java-enabled
- you must have a Java virtual machine or Java Plug-in version 1.1.2 or later installed

- the **java40.jar** file must exist in your Netscape installation directory

  If it does not exist, you will need to download and reinstall Netscape.

Problem: The installation fails with the following error message:

"Error: Failed to run script [C:\Program]"

Solution: There is a directory or file called **Program** *and* **Program Files** in the same target installation directory causing the installation to fail.

Perform one of the following tasks to resolve this issue:

- Delete the **Program** directory or file.
- Rename the **Program** directory or file, perform the installation, then rename the directory or file back to its original name.
- Install PATROL to a directory that does not have a **Program** directory or file.
- When you specify the destination path to install PATROL, use the short name such as **C:\progra~1\bmcsof~1\patrol~1** instead of using **C:\Program Files\BMC Software\Patrol3**.

Error Messages for Unix

This section contains information about specific problems or error messages that you might encounter while installing or configuring PATROL in Unix environments.

Problem: No error message is printed. You cannot correct typing errors in installation utility windows when using an X-emulator on a PC to run the installation utility.

Cause: This can be caused by some X emulation software.

Solution: Usually one of these three controls will delete typed characters: **Backspace**, **Delete**, or **Ctrl+H**.

Message: Can’t Open Display

Cause 1: Your machine does not have permission to open the requested X11 display.

Solution: Type the following command in the OS login window to permit displays on your terminal:
xhost +*your-hostname*

Cause 2: Your *DISPLAY* environment variable is not set or is improperly set.

Solution: For csh users, set your display variable to point to the DISPLAY terminal by typing the following command:
setenv DISPLAY myworkstation:0.0

For sh users, set your display variable by typing the following command:
DISPLAY=myworkstation:0.0; export DISPLAY

For ksh users, set your display variable by typing the following command:
export DISPLAY=myhostname:0.0

Message: PatrolAgent-F-EUSER:PatrolAgent -- not superuser

Cause: The PATROL configuration script was unable to set the ownership and permissions of the PATROL and PATROL Agent executable files.

Solution: Run the **configure.sh** script as described in "Running the Configuration Script on a Unix Computer" on page 4-4. The file attributes should be as follows:
`(rwsr-sr-x) (root) PatrolAgent`

Message: PatrolAgent-F-EUSER:The variable *PATROL_HOME* is not set and *$HOME* is not set

Cause: The environment variable *PATROL_HOME* is not set. The PATROL Console and PATROL Agent use the path stored in this variable to locate required files and utilities.

Solution: BMC Software recommends you always use the PATROL Console startup script (that is, Patrol) or the PATROL Agent startup script (that is, PatrolAgent) in the PATROL installation directory to start the corresponding process. Either script sets the *PATROL_HOME* variable correctly.

If you are a csh user, however, and want to set the *PATROL_HOME* environment variable manually, do so by changing (cd) to the installation directory and entering the following command:
source ./.patrolrc

For sh or ksh users, set the *PATROL_HOME* variable by changing (cd) to the installation directory and entering the following command:
. ./patrolrc.sh

Problem: No error message is printed. PATROL seems to hang when it is started in the background.

Cause: **$PATROL_CACHE** is on an NFS mounted system and NFS is having intermittent network problems.

Solution: Move **$PATROL_CACHE** to a local file system.

Problem: Open Look Window Manager does not respond to mouse movement and "freezes" the screen while running PATROL

Cause: Your management SPARCstation has two or more swap partitions, and not all the partitions are of the same size.

Solution: You may reconfigure your swap partitions and restart XNeWs.

Problem: The Motif Window Manager raises a window when clicked anywhere in the window.

Cause: Motif Window Manager has inappropriate settings for PATROL.

Solution: Add the following two lines to your **.Xdefaults** file:
Mwm*keyboardFocusPolicy: pointer
Mwm*focusAutoRaise: False

Run the following command:
xrdb -merge .Xdefaults

Message: Commands fail with the error “Permission denied” because the agent tried to execute them in a directory the user doesn’t have access to and in which they don’t even exist!

Cause: The version of csh distributed with HP-UX mistakenly searches the command search (*$PATH*) path for programs to be executed. If the PATROL Agent search path at startup contains directories that the user does not have permission to access, the csh search terminates at the first such directory encountered. The terminated search reports that the command is in that directory but cannot be executed because of insufficient privileges.

Solution: Start the agent with a minimal *PATH* that contains only world-readable directories or directories that all PATROL users can access. Make sure that **$PATROL_HOME/bin** is the first entry in the path, so that no path prior to **$PATROL_HOME** can cause a PATROL command to fail.

For csh users, the following example shows how the **setenv** command is used to specify the **$PATROL_HOME** directory as the first directory in the search path:

```
setenv PATH $PATROL_HOME/bin:$PATH
/usr/local/bin:/bin:\
/usr/bin:/etc:/usr/etc
```

For sh or ksh users, the following example shows how the export command is used to specify the **$PATROL_HOME** directory as the first directory in the search path:

```
PATH=${PATROL_HOME}/bin:$PATH
export PATH
```

If you are still having problems, please contact a PATROL product support representative.

Problem: The PATROL directory tree is located on an NFS-mounted file system and errors are encountered with PATROL Agent initialization concerning file permissions.

Solution: Create three new directories on a local writable file system, and set environmental variables to point to them. For example:

cd /usr/local
mkdir patrol
cd patrol
mkdir history config log

The directories should be owned and writable by the default PATROL account, which is usually patrol, or the account defined in *PATROL_ADMIN*, which is also usually patrol. You can make this change with the xpconfig utility.

In csh, the following commands set the environmental variables:

setenv PATROL_HISTORY /usr/local/patrol/history
setenv PATROL_CONFIG /usr/local/patrol/config
setenv PATROL_LOG /usr/local/patrol/log

In sh, the following commands set the environmental variables:

PATROL_HISTORY=/usr/local/patrol/history
export PATROL_HISTORY
PATROL_CONFIG=/usr/local/patrol/config
export PATROL_CONFIG
PATROL_LOG=/usr/local/patrol/log
export PATROL_LOG

The environment commands may be placed in the **.patrolrc** file (for csh) or **patrolrc.sh** file (for sh or ksh).

Problem: The installation utility will fail if a proxy server is specified for internet connections in a supported Web browser.

Solution: Remove the proxy server connection setting or bypass it by performing the following task for your browser:

- Internet Explorer: In the browser window, select **Tools** => **Internet Options** => **Connections tab** => **LAN Settings** => **Bypass proxy server for local addresses**.
- Netscape: In the browser window, select **Edit** => **Preferences** => **Advanced** => **Proxies** => **Manual Proxy Configuration** => **View** and enter your domain in the Exceptions field.

Problem: The following error messages are seen during a product installation:

```
javascript error - line 67, screen not defined
javacript error - line 145, setInterval is not
defined.
```

Solution: You are using a version of Netscape that is not supported by the installation utility. Use one of the following versions: 4.75, 4.76, 4.77, or 4.78.

Problem: The installation utility may encounter problems such as not being able to access the root account during installation.

Solution: If you are using a Korn shell or C shell to perform the installation, switch to a Bourne shell. The preferred login shell is a Bourne shell. A Korn shell or a C shell is acceptable, but they may cause problems during the installation.

Problem: The installation utility online Help does not display properly; for example, the Contents, Index, and Search tabs are not displayed.

Solution: To properly display the Help

- the Web browser that you are using to run the installation utility must be Java-enabled
- you must have a Java virtual machine or Java Plug-in version 1.1.2 or later installed
- the **java40.jar** file must exist in your Netscape installation directory

  If it does not exist, you will need to download and reinstall Netscape.
- the variable *MOZILLA_HOME* should be set to point to the root of the Netscape installation directory

Example

For sh or ksh users, if the Netscape installation directory is **/opt/netscape**, enter the following commands to set this variable:

```
MOZILLA_HOME=/opt/netscape
export MOZILLA_HOME
```

Example

For csh users, if the Netscape installation directory is **/opt/netscape**, enter the following command to set this variable:

```
setenv MOZILLA_HOME /opt/netscape
```

Problem: After installing the PATROL for Unix KM version 8.3.06, the **Health-at-a-glance** and **SNMPHealth** icons are missing on the PATROL Console for Unix.

Solution: To resolve this issue, select the **Custom** installation type and the **Console Systems** role when you install the PATROL for Unix KM from the PATROL Solutions for Unix product CD.

Problem: After performing an over-the-top installation of the PATROL Agent or PATROL Console for Unix 3.5 that uses PATROL for Unix 8.3.07, the agent fails to start and the following error message is displayed:

```
error:unable to get stat of
/etc/patrol.d/security_policy/site.plc, errno 2
```

Solution: PATROL Security component files are missing under **/etc/patrol.d/security_policy**, because the installation utility was unable to access the root account during the product installation.

To resolve this issue, perform the following steps:

1. Download the **sec_configure_P1202.tar** patch from the BMC Software ftp site at the following URL:
   ftp://ftp.bmc.com/pub/patrol/patches/P_SECURITY/3.5/Unix/1.2.02

2. Follow the instructions for installing the patch in the **sec_configure_P1202.readme** file.

Note

Before you apply the patch file, you must have previously installed either the PATROL Console for Unix or the PATROL Agent version 3.5. Execution of the patch requires security script files that are included during the installation of either of these components.

---

3. Run the following scripts as root to perform post-installation product configuration to set permissions and links:

   - **configure.sh**, found in the **BMCINSTBASE** directory

- **b1config.sh**, found in the **BMCINSTBASE/Patrol35** directory

Note

If you enter the root password during the installation, the post-installation product configuration will be performed automatically. In this case, you will not need to run these configuration scripts.

Problem: The installation shows a failure even though the correct directories and files were laid down. The following error message is displayed on the last window of the installation utility:

```
FAILED!
The following products and components have NOT been
successfully installed on your machine.

To review the details of the installation, click View
Log.
```

Solution: The root password was not supplied, so the installation utility was unable to perform post-installation product configuration.

To resolve this issue, perform the following steps:

1. Download the **sec_configure_P1202.tar** patch from the BMC Software ftp site at the following URL:
   ftp://ftp.bmc.com/pub/patrol/patches/P_SECURITY/3.5/Unix/1.2.02

2. Follow the instructions for installing the patch in the **sec_configure_P1202.readme** file.

Note

Before you apply the patch file, you must have previously installed either the PATROL Console for Unix or the PATROL Agent version 3.5. Execution of the patch requires security script files that are included during the installation of either of these components.

3. Run the following scripts as root to perform post-installation product configuration to set permissions and links:

   - **configure.sh**, found in the **BMCINSTBASE** directory
   - **b1config.sh**, found in the **BMCINSTBASE/Patrol35** directory

Note

If you enter the root password during the installation, the post-installation product configuration will be performed automatically. In this case, you will not need to run these configuration scripts.

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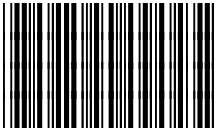
Notes



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